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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Defense-Wide

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense-Wide • Budget Estimates FY 2019 • RDT&E Program

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

13 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	19,542,639	18,639,241	18,639,241	442,104	442,104
Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104

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Department of Defense
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 (Dollars in Thousands)

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW	1,010,220	-1,010,220		20,091,565	-1,010,220	19,081,345
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	-1,010,220	19,081,345

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Department of Defense
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Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

13 Feb 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	21,892,495	624,602	22,517,097
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Basic Research	653,938	697,347	697,347		
Applied Research	1,659,681	1,914,090	1,914,090		
Advanced Technology Development	3,117,329	3,445,847	3,445,847	25,000	25,000
Advanced Component Development And Prototypes	7,639,450	7,736,741	7,736,741		
System Development And Demonstration	620,860	818,819	818,819		
Management Support	1,272,781	1,010,530	1,010,530		
Operational System Development	4,578,600	4,867,528	4,867,528	201,096	201,096
Undistributed		-1,851,661	-1,851,661	216,008	216,008
Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104
<u>Summary Recap of FYDP Programs</u>					
General Purpose Forces	67,049	72,790	72,790		
Intelligence and Communications	529,992	588,968	588,968		
Research and Development	14,711,300	15,305,560	15,305,560	25,000	25,000
Central Supply and Maintenance	19,749	4,694	4,694		
Training Medical and Other	29,149	44,500	44,500		
Administration and Associated Activities	32,724	-1,816,601	-1,816,601	216,008	216,008
Special Operations Forces	542,069	633,829	633,829	4,920	4,920

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Summary Recap of Budget Activities	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Basic Research				697,347	697,347
Applied Research				1,914,090	1,914,090
Advanced Technology Development	5,000	-5,000		3,475,847	3,470,847
Advanced Component Development And Prototypes	930,600	-930,600		8,667,341	7,736,741
System Development And Demonstration				818,819	818,819
Management Support	30,000	-30,000		1,040,530	1,010,530
Operational System Development	44,620	-44,620		5,113,244	5,068,624
Undistributed				-1,635,653	-1,635,653
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	19,081,345
Summary Recap of FYDP Programs					
General Purpose Forces				72,790	72,790
Intelligence and Communications				588,968	588,968
Research and Development	951,600	-951,600		16,282,160	15,330,560
Central Supply and Maintenance				4,694	4,694
Training Medical and Other				44,500	44,500
Administration and Associated Activities				-1,600,593	-1,600,593
Special Operations Forces				638,749	638,749

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total

Basic Research	708,114		708,114
Applied Research	1,976,937		1,976,937
Advanced Technology Development	3,699,612	38,648	3,738,260
Advanced Component Development And Prototypes	8,709,725	242,668	8,952,393
System Development And Demonstration	831,189		831,189
Management Support	1,117,030		1,117,030
Operational System Development	4,849,888	343,286	5,193,174
Undistributed			
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097
Summary Recap of FYDP Programs			

General Purpose Forces	75,517		75,517
Intelligence and Communications	675,726		675,726
Research and Development	16,635,616	281,316	16,916,932
Central Supply and Maintenance	4,892		4,892
Training Medical and Other	42,940		42,940
Administration and Associated Activities	33,730		33,730
Special Operations Forces	568,868	27,097	595,965

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Space		52,543	52,543		
Classified Programs	3,610,607	3,752,958	3,752,958	196,176	196,176
Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104

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	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Space	14,000	-14,000		66,543	-14,000	52,543
Classified Programs	44,620	-44,620		3,993,754	-44,620	3,949,134
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	-1,010,220	19,081,345

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	FY 2019 Base	FY 2019 OCO	FY 2019 Total
	-----	-----	-----
Space	55,762		55,762
Classified Programs	3,799,444	316,189	4,115,633
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097

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Summary Recap of Budget Activities	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Basic Research	653,938	697,347	697,347		
Applied Research	1,659,681	1,914,090	1,914,090		
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Advanced Component Development And Prototypes	7,639,450	7,736,741	7,736,741		
System Development And Demonstration	620,860	818,819	818,819		
Management Support	1,272,781	1,010,530	1,010,530		
Operational System Development	4,578,600	4,867,528	4,867,528	201,096	201,096
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Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104
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General Purpose Forces	67,049	72,790	72,790		
Intelligence and Communications	529,992	588,968	588,968		
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Central Supply and Maintenance	19,749	4,694	4,694		
Training Medical and Other	29,149	44,500	44,500		
Administration and Associated Activities	32,724	-1,816,601	-1,816,601	216,008	216,008
Special Operations Forces	542,069	633,829	633,829	4,920	4,920

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Summary Recap of Budget Activities	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Basic Research				697,347	697,347
Applied Research				1,914,090	1,914,090
Advanced Technology Development	5,000	-5,000		3,475,847	3,470,847
Advanced Component Development And Prototypes	930,600	-930,600		8,667,341	7,736,741
System Development And Demonstration				818,819	818,819
Management Support	30,000	-30,000		1,040,530	1,010,530
Operational System Development	44,620	-44,620		5,113,244	5,068,624
Undistributed				-1,635,653	-1,635,653
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	19,081,345
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General Purpose Forces				72,790	72,790
Intelligence and Communications				588,968	588,968
Research and Development	951,600	-951,600		16,282,160	15,330,560
Central Supply and Maintenance				4,694	4,694
Training Medical and Other				44,500	44,500
Administration and Associated Activities				-1,600,593	-1,600,593
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Advanced Component Development And Prototypes	8,709,725	242,668	8,952,393
System Development And Demonstration	831,189		831,189
Management Support	1,117,030		1,117,030
Operational System Development	4,849,888	343,286	5,193,174
Undistributed			
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097
Summary Recap of FYDP Programs			

General Purpose Forces	75,517		75,517
Intelligence and Communications	675,726		675,726
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Training Medical and Other	42,940		42,940
Administration and Associated Activities	33,730		33,730
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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					

Space		52,543	52,543		
Classified Programs	3,610,607	3,752,958	3,752,958	196,176	196,176
Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104

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Summary Recap of Budget Activities	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency
Space	14,000	-14,000		66,543	-14,000	52,543
Classified Programs	44,620	-44,620		3,993,754	-44,620	3,949,134
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	-1,010,220	19,081,345

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Space	55,762		55,762
Classified Programs	3,799,444	316,189	4,115,633
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Chemical and Biological Defense Program	909,946	1,095,642	1,095,642		
Defense Advanced Research Projects Agency	2,887,661	3,170,390	3,170,390		
Defense Contract Audit Agency					
Defense Contract Management Agency	11,505	12,322	12,322		
Defense-Wide		-1,851,661	-1,851,661	216,008	216,008
Defense Human Resources Activity	16,888	35,249	35,249		
Defense Intelligence Agency					
Defense Information Systems Agency	256,390	256,494	256,494		
Defense Logistics Agency	189,190	319,796	319,796		
Defense Security Cooperative Agency	9,572	16,619	16,619		
Defense Security Service	9,275				
Defense Technical Information Center	48,234	58,332	58,332		
Defense Threat Reduction Agency	460,982	469,957	469,957		
Missile Defense Agency	6,201,226	6,200,711	6,200,711		
National Geospatial Intelligence Agency					
National Security Agency					
Office of Secretary of Defense	4,084,372	4,041,233	4,041,233	25,000	25,000
U.S., Special Operations Command	547,484	639,325	639,325	4,920	4,920
The Joint Staff	66,555	116,141	116,141		

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Appropriation	FY 2018		FY 2018		FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	
Chemical and Biological Defense Program			1,095,642		1,095,642	
Defense Advanced Research Projects Agency			3,170,390		3,170,390	
Defense Contract Audit Agency						
Defense Contract Management Agency			12,322		12,322	
Defense-Wide			-1,635,653		-1,635,653	
Defense Human Resources Activity			35,249		35,249	
Defense Intelligence Agency						
Defense Information Systems Agency			256,494		256,494	
Defense Logistics Agency			319,796		319,796	
Defense Security Cooperative Agency			16,619		16,619	
Defense Security Service						
Defense Technical Information Center			58,332		58,332	
Defense Threat Reduction Agency			469,957		469,957	
Missile Defense Agency	597,500	-597,500	6,798,211	-597,500	6,200,711	
National Geospatial Intelligence Agency						
National Security Agency						
Office of Secretary of Defense	368,100	-368,100	4,434,333	-368,100	4,066,233	
U.S., Special Operations Command			644,245		644,245	
The Joint Staff			116,141		116,141	

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Chemical and Biological Defense Program	1,047,814		1,047,814
Defense Advanced Research Projects Agency	3,438,766		3,438,766
Defense Contract Audit Agency	2,600		2,600
Defense Contract Management Agency	11,988		11,988
Defense-Wide			
Defense Human Resources Activity	25,210		25,210
Defense Intelligence Agency			
Defense Information Systems Agency	268,740		268,740
Defense Logistics Agency	273,011		273,011
Defense Security Cooperative Agency	8,028		8,028
Defense Security Service			
Defense Technical Information Center	60,977		60,977
Defense Threat Reduction Agency	517,188	256,316	773,504
Missile Defense Agency	6,777,299		6,777,299
National Geospatial Intelligence Agency			
National Security Agency			
Office of Secretary of Defense	4,650,932	25,000	4,675,932
U.S., Special Operations Command	575,154	27,097	602,251
The Joint Staff	128,287		128,287

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Washington Headquarters Services	768	29,594	29,594		
Total Research, Development, Test & Evaluation	19,542,639	18,639,241	18,639,241	442,104	442,104

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Washington Headquarters Services				29,594	29,594
Total Research, Development, Test & Evaluation	1,010,220	-1,010,220		20,091,565	19,081,345

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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Washington Headquarters Services	30,364		30,364
Total Research, Development, Test & Evaluation	21,892,495	624,602	22,517,097

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
1	0601000BR	DTRA Basic Research	01	34,623	37,201	37,201			U
2	0601101E	Defense Research Sciences	01	356,861	432,347	432,347			U
3	0601110D8Z	Basic Research Initiatives	01	66,750	40,612	40,612			U
4	0601117E	Basic Operational Medical Research Science	01	42,250	43,126	43,126			U
5	0601120D8Z	National Defense Education Program	01	76,995	74,298	74,298			U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	32,709	25,865	25,865			U
7	0601384BP	Chemical and Biological Defense Program	01	43,750	43,898	43,898			U
		Basic Research		653,938	697,347	697,347			
8	0602000D8Z	Joint Munitions Technology	02	17,611	19,111	19,111			U
9	0602115E	Biomedical Technology	02	95,801	109,360	109,360			U
10	0602230D8Z	Defense Technology Innovation	02	9,989					U
11	0602234D8Z	Lincoln Laboratory Research Program	02	46,500	49,748	49,748			U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	40,798	49,226	49,226			U
13	0602303E	Information & Communications Technology	02	341,942	392,784	392,784			U
14	0602383E	Biological Warfare Defense	02	20,453	13,014	13,014			U
15	0602384BP	Chemical and Biological Defense Program	02	185,864	201,053	201,053			U
16	0602668D8Z	Cyber Security Research	02	11,906	14,775	14,775			U

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
1	0601000BR	DTRA Basic Research	01				37,201		37,201	U
2	0601101E	Defense Research Sciences	01				432,347		432,347	U
3	0601110D8Z	Basic Research Initiatives	01				40,612		40,612	U
4	0601117E	Basic Operational Medical Research Science	01				43,126		43,126	U
5	0601120D8Z	National Defense Education Program	01				74,298		74,298	U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01				25,865		25,865	U
7	0601384BP	Chemical and Biological Defense Program	01				43,898		43,898	U
		Basic Research					697,347		697,347	
8	0602000D8Z	Joint Munitions Technology	02				19,111		19,111	U
9	0602115E	Biomedical Technology	02				109,360		109,360	U
10	0602230D8Z	Defense Technology Innovation	02							U
11	0602234D8Z	Lincoln Laboratory Research Program	02				49,748		49,748	U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02				49,226		49,226	U
13	0602303E	Information & Communications Technology	02				392,784		392,784	U
14	0602383E	Biological Warfare Defense	02				13,014		13,014	U
15	0602384BP	Chemical and Biological Defense Program	02				201,053		201,053	U
16	0602668D8Z	Cyber Security Research	02				14,775		14,775	U

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1	0601000BR	DTRA Basic Research	01	37,023		37,023	U
2	0601101E	Defense Research Sciences	01	422,130		422,130	U
3	0601110D8Z	Basic Research Initiatives	01	42,702		42,702	U
4	0601117E	Basic Operational Medical Research Science	01	47,825		47,825	U
5	0601120D8Z	National Defense Education Program	01	85,919		85,919	U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	30,412		30,412	U
7	0601384BP	Chemical and Biological Defense Program	01	42,103		42,103	U
		Basic Research		708,114		708,114	
8	0602000D8Z	Joint Munitions Technology	02	19,170		19,170	U
9	0602115E	Biomedical Technology	02	101,300		101,300	U
10	0602230D8Z	Defense Technology Innovation	02				U
11	0602234D8Z	Lincoln Laboratory Research Program	02	51,596		51,596	U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	60,688		60,688	U
13	0602303E	Information & Communications Technology	02	395,317		395,317	U
14	0602383E	Biological Warfare Defense	02	38,640		38,640	U
15	0602384BP	Chemical and Biological Defense Program	02	192,674		192,674	U
16	0602668D8Z	Cyber Security Research	02	14,969		14,969	U

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17	0602702E	Tactical Technology	02	285,348	343,776	343,776			U
18	0602715E	Materials and Biological Technology	02	208,855	224,440	224,440			U
19	0602716E	Electronics Technology	02	190,624	295,447	295,447			U
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	151,028	157,908	157,908			U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	8,105	8,955	8,955			U
22	1160401BB	SOF Technology Development	02	44,857	34,493	34,493			U
		Applied Research		1,659,681	1,914,090	1,914,090			
23	0603000D8Z	Joint Munitions Advanced Technology	03	23,742	25,627	25,627			U
24	0603122D8Z	Combating Terrorism Technology Support	03	113,366	76,230	76,230	25,000	25,000	U
25	0603133D8Z	Foreign Comparative Testing	03	18,966	24,199	24,199			U
26	0603134BR	Counter Improvised-Threat Simulation	03						U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	260,396	268,607	268,607			U
28	0603176C	Advanced Concepts and Performance Assessment	03	14,534	12,996	12,996			U
29	0603178C	Weapons Technology	03	47,403	5,495	5,495			U
30	0603179C	Advanced C4ISR	03	3,489					U
31	0603180C	Advanced Research	03	27,185	20,184	20,184			U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	16,618	18,662	18,662			U

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17	0602702E	Tactical Technology	02				343,776		343,776	U
18	0602715E	Materials and Biological Technology	02				224,440		224,440	U
19	0602716E	Electronics Technology	02				295,447		295,447	U
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02				157,908		157,908	U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02				8,955		8,955	U
22	1160401BB	SOF Technology Development	02				34,493		34,493	U
		Applied Research					1,914,090		1,914,090	
23	0603000D8Z	Joint Munitions Advanced Technology	03				25,627		25,627	U
24	0603122D8Z	Combating Terrorism Technology Support	03				101,230		101,230	U
25	0603133D8Z	Foreign Comparative Testing	03				24,199		24,199	U
26	0603134BR	Counter Improvised-Threat Simulation	03							U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03				268,607		268,607	U
28	0603176C	Advanced Concepts and Performance Assessment	03				12,996		12,996	U
29	0603178C	Weapons Technology	03				5,495		5,495	U
30	0603179C	Advanced C4ISR	03							U
31	0603180C	Advanced Research	03				20,184		20,184	U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03				18,662		18,662	U

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17	0602702E	Tactical Technology	02	335,466		335,466	U
18	0602715E	Materials and Biological Technology	02	226,898		226,898	U
19	0602716E	Electronics Technology	02	333,847		333,847	U
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	161,151		161,151	U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	9,300		9,300	U
22	1160401BB	SOF Technology Development	02	35,921		35,921	U
		Applied Research		1,976,937		1,976,937	
23	0603000D8Z	Joint Munitions Advanced Technology	03	25,598		25,598	U
24	0603122D8Z	Combating Terrorism Technology Support	03	125,271	25,000	150,271	U
25	0603133D8Z	Foreign Comparative Testing	03	24,532		24,532	U
26	0603134BR	Counter Improvised-Threat Simulation	03		13,648	13,648	U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	299,858		299,858	U
28	0603176C	Advanced Concepts and Performance Assessment	03	13,017		13,017	U
29	0603178C	Weapons Technology	03				U
30	0603179C	Advanced C4ISR	03				U
31	0603180C	Advanced Research	03	20,365		20,365	U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	18,644		18,644	U

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33	0603274C	Special Program - MDA Technology	03	12,509					U
34	0603286E	Advanced Aerospace Systems	03	180,780	155,406	155,406			U
35	0603287E	Space Programs and Technology	03	162,643	247,435	247,435			U
36	0603288D8Z	Analytic Assessments	03	11,603	13,154	13,154			U
37	0603289D8Z	Advanced Innovative Analysis and Concepts	03	55,679	37,674	37,674			U
38	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03		15,000	15,000			U
39	0603294C	Common Kill Vehicle Technology	03	54,395	252,879	252,879			U
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03		29,594	29,594			U
41	0603375D8Z	Technology Innovation	03	24,895	59,863	59,863			U
42	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	130,033	145,359	145,359			U
43	0603527D8Z	RETRACT LARCH	03	175,135	171,120	171,120			U
44	0603618D8Z	Joint Electronic Advanced Technology	03	21,376	14,389	14,389			U
45	0603648D8Z	Joint Capability Technology Demonstrations	03	127,961	105,871	105,871			U
46	0603662D8Z	Networked Communications Capabilities	03	9,123	12,661	12,661			U
47	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	177,419	136,159	136,159			U
48	0603680S	Manufacturing Technology Program	03	19,736	40,511	40,511			U

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				Emergency Requests**	Emergency	Total	Less Enacted	Remaining Req		
				P.L.115-96***	MDDE + Ship	with CR Adj	P.L.115-96***	with CR Adj		
				Emergency	Repairs	Emergency**	Repairs	Emergency	Emergency	c
33	0603274C	Special Program - MDA Technology	03							U
34	0603286E	Advanced Aerospace Systems	03			155,406		155,406		U
35	0603287E	Space Programs and Technology	03			247,435		247,435		U
36	0603288D8Z	Analytic Assessments	03			13,154		13,154		U
37	0603289D8Z	Advanced Innovative Analysis and Concepts	03			37,674		37,674		U
38	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03			15,000		15,000		U
39	0603294C	Common Kill Vehicle Technology	03			252,879		252,879		U
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03			29,594		29,594		U
41	0603375D8Z	Technology Innovation	03	5,000	-5,000	64,863	-5,000	59,863		U
42	0603384BP	Chemical and Biological Defense Program - Advanced Development	03			145,359		145,359		U
43	0603527D8Z	RETRACT LARCH	03			171,120		171,120		U
44	0603618D8Z	Joint Electronic Advanced Technology	03			14,389		14,389		U
45	0603648D8Z	Joint Capability Technology Demonstrations	03			105,871		105,871		U
46	0603662D8Z	Networked Communications Capabilities	03			12,661		12,661		U
47	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03			136,159		136,159		U
48	0603680S	Manufacturing Technology Program	03			40,511		40,511		U

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33	0603274C	Special Program - MDA Technology	03				U
34	0603286E	Advanced Aerospace Systems	03	277,603		277,603	U
35	0603287E	Space Programs and Technology	03	254,671		254,671	U
36	0603288D8Z	Analytic Assessments	03	19,472		19,472	U
37	0603289D8Z	Advanced Innovative Analysis and Concepts	03	37,263		37,263	U
38	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03	13,621		13,621	U
39	0603294C	Common Kill Vehicle Technology	03	189,753		189,753	U
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03	29,364		29,364	U
41	0603375D8Z	Technology Innovation	03	83,143		83,143	U
42	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	142,826		142,826	U
43	0603527D8Z	RETRACT LARCH	03	161,128		161,128	U
44	0603618D8Z	Joint Electronic Advanced Technology	03	12,918		12,918	U
45	0603648D8Z	Joint Capability Technology Demonstrations	03	106,049		106,049	U
46	0603662D8Z	Networked Communications Capabilities	03	12,696		12,696	U
47	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	114,637		114,637	U
48	0603680S	Manufacturing Technology Program	03	49,667		49,667	U

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49	0603699D8Z	Emerging Capabilities Technology Development	03	54,279	57,876	57,876			U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	14,541	10,611	10,611			U
51	0603713S	Deployment and Distribution Enterprise Technology	03	6,618					U
52	0603716D8Z	Strategic Environmental Research Program	03	63,177	71,832	71,832			U
53	0603720S	Microelectronics Technology Development and Support	03	88,369	219,803	219,803			U
54	0603727D8Z	Joint Warfighting Program	03	4,581	6,349	6,349			U
55	0603739E	Advanced Electronics Technologies	03	52,990	79,173	79,173			U
56	0603760E	Command, Control and Communications Systems	03	123,934	106,787	106,787			U
57	0603766E	Network-Centric Warfare Technology	03	417,826	439,386	439,386			U
58	0603767E	Sensor Technology	03	239,391	210,123	210,123			U
59	0603769D8Z	Distributed Learning Advanced Technology Development	03	10,384	11,211	11,211			U
60	0603781D8Z	Software Engineering Institute	03	13,726	15,047	15,047			U
61	0603826D8Z	Quick Reaction Special Projects	03	77,354	69,203	69,203			U
62	0603833D8Z	Engineering Science & Technology	03	22,198	25,395	25,395			U
63	0603924D8Z	High Energy Laser Advanced Technology Program	03						U

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49 0603699D8Z	Emerging Capabilities Technology Development	03				57,876		57,876	U
50 0603712S	Generic Logistics R&D Technology Demonstrations	03				10,611		10,611	U
51 0603713S	Deployment and Distribution Enterprise Technology	03							U
52 0603716D8Z	Strategic Environmental Research Program	03				71,832		71,832	U
53 0603720S	Microelectronics Technology Development and Support	03				219,803		219,803	U
54 0603727D8Z	Joint Warfighting Program	03				6,349		6,349	U
55 0603739E	Advanced Electronics Technologies	03				79,173		79,173	U
56 0603760E	Command, Control and Communications Systems	03				106,787		106,787	U
57 0603766E	Network-Centric Warfare Technology	03				439,386		439,386	U
58 0603767E	Sensor Technology	03				210,123		210,123	U
59 0603769D8Z	Distributed Learning Advanced Technology Development	03				11,211		11,211	U
60 0603781D8Z	Software Engineering Institute	03				15,047		15,047	U
61 0603826D8Z	Quick Reaction Special Projects	03				69,203		69,203	U
62 0603833D8Z	Engineering Science & Technology	03				25,395		25,395	U
63 0603924D8Z	High Energy Laser Advanced Technology Program	03							U

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49	0603699D8Z	Emerging Capabilities Technology Development	03	48,338		48,338	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,778		11,778	U
51	0603713S	Deployment and Distribution Enterprise Technology	03				U
52	0603716D8Z	Strategic Environmental Research Program	03	76,514		76,514	U
53	0603720S	Microelectronics Technology Development and Support	03	168,931		168,931	U
54	0603727D8Z	Joint Warfighting Program	03	5,992		5,992	U
55	0603739E	Advanced Electronics Technologies	03	111,099		111,099	U
56	0603760E	Command, Control and Communications Systems	03	185,984		185,984	U
57	0603766E	Network-Centric Warfare Technology	03	438,569		438,569	U
58	0603767E	Sensor Technology	03	190,128		190,128	U
59	0603769D8Z	Distributed Learning Advanced Technology Development	03	13,564		13,564	U
60	0603781D8Z	Software Engineering Institute	03	15,050		15,050	U
61	0603826D8Z	Quick Reaction Special Projects	03	69,626		69,626	U
62	0603833D8Z	Engineering Science & Technology	03	19,415		19,415	U
63	0603924D8Z	High Energy Laser Advanced Technology Program	03	69,533		69,533	U

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64	0603941D8Z	Test & Evaluation Science & Technology	03	89,605	89,586	89,586			U
65	0604055D8Z	Operational Energy Capability Improvement	03	41,459	38,403	38,403			U
66	0303310D8Z	CWMD Systems	03	19,587	33,382	33,382			U
67	1160402BB	SOF Advanced Technology Development	03	88,324	72,605	72,605			U
		Advanced Technology Development		3,117,329	3,445,847	3,445,847	25,000	25,000	
68	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	25,851	32,937	32,937			U
69	0603600D8Z	WALKOFF	04	96,038	101,714	101,714			U
70	0603821D8Z	Acquisition Enterprise Data & Information Services	04	1,761	2,198	2,198			U
71	0603851D8Z	Environmental Security Technical Certification Program	04	46,440	54,583	54,583			U
72	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	197,171	230,162	230,162			U
73	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,034,861	828,097	828,097			U
74	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	134,682	148,518	148,518			U
75	0603884C	Ballistic Missile Defense Sensors	04	252,665	247,345	247,345			U
76	0603890C	BMD Enabling Programs	04	435,203	449,442	449,442			U
77	0603891C	Special Programs - MDA	04	289,364	320,190	320,190			U
78	0603892C	AEGIS BMD	04	889,489	852,052	852,052			U

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64	0603941D8Z	Test & Evaluation Science & Technology	03				89,586		89,586	U
65	0604055D8Z	Operational Energy Capability Improvement	03				38,403		38,403	U
66	0303310D8Z	CWMD Systems	03				33,382		33,382	U
67	1160402BB	SOF Advanced Technology Development	03				72,605		72,605	U
		Advanced Technology Development		5,000	-5,000		3,475,847	-5,000	3,470,847	
68	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04				32,937		32,937	U
69	0603600D8Z	WALKOFF	04				101,714		101,714	U
70	0603821D8Z	Acquisition Enterprise Data & Information Services	04				2,198		2,198	U
71	0603851D8Z	Environmental Security Technical Certification Program	04				54,583		54,583	U
72	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	62,100	-62,100		292,262	-62,100	230,162	U
73	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	129,000	-129,000		957,097	-129,000	828,097	U
74	0603884BP	Chemical and Biological Defense Program - Dem/Val	04				148,518		148,518	U
75	0603884C	Ballistic Missile Defense Sensors	04	30,800	-30,800		278,145	-30,800	247,345	U
76	0603890C	BMD Enabling Programs	04	16,200	-16,200		465,642	-16,200	449,442	U
77	0603891C	Special Programs - MDA	04	45,000	-45,000		365,190	-45,000	320,190	U
78	0603892C	AEGIS BMD	04	8,736	-8,736		860,788	-8,736	852,052	U

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
64	0603941D8Z	Test & Evaluation Science & Technology	03	96,389		96,389	U
65	0604055D8Z	Operational Energy Capability Improvement	03	40,582		40,582	U
66	0303310D8Z	CWMD Systems	03	26,644		26,644	U
67	1160402BB	SOF Advanced Technology Development	03	79,380		79,380	U
		Advanced Technology Development		3,699,612	38,648	3,738,260	
68	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	28,140		28,140	U
69	0603600D8Z	WALKOFF	04	92,222		92,222	U
70	0603821D8Z	Acquisition Enterprise Data & Information Services	04	2,506		2,506	U
71	0603851D8Z	Environmental Security Technical Certification Program	04	40,016		40,016	U
72	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	214,173		214,173	U
73	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	926,359		926,359	U
74	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	129,886		129,886	U
75	0603884C	Ballistic Missile Defense Sensors	04	220,876		220,876	U
76	0603890C	BMD Enabling Programs	04	540,926		540,926	U
77	0603891C	Special Programs - MDA	04	422,348		422,348	U
78	0603892C	AEGIS BMD	04	767,539		767,539	U

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79	0603893C	Space Tracking & Surveillance System	04	37,809					U
80	0603895C	Ballistic Missile Defense System Space Programs	04	20,910					U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	465,433	430,115	430,115			U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	47,402	48,954	48,954			U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	53,483	53,265	53,265			U
84	0603906C	Regarding Trench	04	7,303	9,113	9,113			U
85	0603907C	Sea Based X-Band Radar (SBX)	04	115,201	130,695	130,695			U
86	0603913C	Israeli Cooperative Programs	04	268,735	105,354	105,354			U
87	0603914C	Ballistic Missile Defense Test	04	294,441	305,791	305,791			U
88	0603915C	Ballistic Missile Defense Targets	04	521,784	410,425	410,425			U
89	0603920D8Z	Humanitarian Demining	04	9,740	10,837	10,837			U
90	0603923D8Z	Coalition Warfare	04	9,789	10,740	10,740			U
91	0604016D8Z	Department of Defense Corrosion Program	04	14,394	3,837	3,837			U
92	0604115C	Technology Maturation Initiatives	04	84,514	128,406	128,406			U
93	0604132D8Z	Missile Defeat Project	04	138,350	98,369	98,369			U
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04						U

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79	0603893C	Space Tracking & Surveillance System	04							U
80	0603895C	Ballistic Missile Defense System Space Programs	04							U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	24,747	-24,747		454,862	-24,747	430,115	U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04				48,954		48,954	U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04				53,265		53,265	U
84	0603906C	Regarding Trench	04				9,113		9,113	U
85	0603907C	Sea Based X-Band Radar (SBX)	04	15,000	-15,000		145,695	-15,000	130,695	U
86	0603913C	Israeli Cooperative Programs	04				105,354		105,354	U
87	0603914C	Ballistic Missile Defense Test	04	10,402	-10,402		316,193	-10,402	305,791	U
88	0603915C	Ballistic Missile Defense Targets	04	49,700	-49,700		460,125	-49,700	410,425	U
89	0603920D8Z	Humanitarian Demining	04				10,837		10,837	U
90	0603923D8Z	Coalition Warfare	04				10,740		10,740	U
91	0604016D8Z	Department of Defense Corrosion Program	04				3,837		3,837	U
92	0604115C	Technology Maturation Initiatives	04				128,406		128,406	U
93	0604132D8Z	Missile Defeat Project	04	26,400	-26,400		124,769	-26,400	98,369	U
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04							U

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79	0603893C	Space Tracking & Surveillance System	04				U
80	0603895C	Ballistic Missile Defense System Space Programs	04				U
81	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	475,168		475,168	U
82	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	48,767		48,767	U
83	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	54,925		54,925	U
84	0603906C	Regarding Trench	04	16,916		16,916	U
85	0603907C	Sea Based X-Band Radar (SBX)	04	149,715		149,715	U
86	0603913C	Israeli Cooperative Programs	04	300,000		300,000	U
87	0603914C	Ballistic Missile Defense Test	04	365,681		365,681	U
88	0603915C	Ballistic Missile Defense Targets	04	517,852		517,852	U
89	0603920D8Z	Humanitarian Demining	04	11,347		11,347	U
90	0603923D8Z	Coalition Warfare	04	8,528		8,528	U
91	0604016D8Z	Department of Defense Corrosion Program	04	3,477		3,477	U
92	0604115C	Technology Maturation Initiatives	04	148,822		148,822	U
93	0604132D8Z	Missile Defeat Project	04	58,607		58,607	U
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	12,993	242,668	255,661	U

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95	0604181C	Hypersonic Defense	04		75,300	75,300			U
96	0604250D8Z	Advanced Innovative Technologies	04	850,762	1,175,832	1,175,832			U
97	0604294D8Z	Trusted & Assured Microelectronics	04		83,626	83,626			U
98	0604331D8Z	Rapid Prototyping Program	04	100,000	100,000	100,000			U
99	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	7,254	3,967	3,967			U
100	0604673C	Pacific Discriminating Radar	04						U
101	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04	3,850	3,833	3,833			U
102	0604775D8Z	Defense Rapid Innovation Program	04	250,000					U
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,630	23,638	23,638			U
104	0604873C	Long Range Discrimination Radar (LRDR)	04	186,172	357,659	357,659			U
105	0604874C	Improved Homeland Defense Interceptors	04	247,362	465,530	465,530			U
106	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	57,567	36,239	36,239			U
107	0604878C	Aegis BMD Test	04	131,012	134,468	134,468			U
108	0604879C	Ballistic Missile Defense Sensor Test	04	81,376	84,239	84,239			U
109	0604880C	Land-Based SM-3 (LBSM3)	04	40,452	30,486	30,486			U
110	0604881C	AEGIS SM-3 Block IIA Co-Development	04	102,272	9,739	9,739			U

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95	0604181C	Hypersonic Defense	04				75,300		75,300	U
96	0604250D8Z	Advanced Innovative Technologies	04	306,700	-306,700		1,482,532	-306,700	1,175,832	U
97	0604294D8Z	Trusted & Assured Microelectronics	04				83,626		83,626	U
98	0604331D8Z	Rapid Prototyping Program	04				100,000		100,000	U
99	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04				3,967		3,967	U
100	0604673C	Pacific Discriminating Radar	04							U
101	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04				3,833		3,833	U
102	0604775D8Z	Defense Rapid Innovation Program	04							U
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04				23,638		23,638	U
104	0604873C	Long Range Discrimination Radar (LRDR)	04				357,659		357,659	U
105	0604874C	Improved Homeland Defense Interceptors	04	170,900	-170,900		636,430	-170,900	465,530	U
106	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04				36,239		36,239	U
107	0604878C	Aegis BMD Test	04	3,315	-3,315		137,783	-3,315	134,468	U
108	0604879C	Ballistic Missile Defense Sensor Test	04	17,600	-17,600		101,839	-17,600	84,239	U
109	0604880C	Land-Based SM-3 (LBSM3)	04				30,486		30,486	U
110	0604881C	AEGIS SM-3 Block IIA Co-Development	04				9,739		9,739	U

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95	0604181C	Hypersonic Defense	04	120,444		120,444	U
96	0604250D8Z	Advanced Innovative Technologies	04	1,431,702		1,431,702	U
97	0604294D8Z	Trusted & Assured Microelectronics	04	233,142		233,142	U
98	0604331D8Z	Rapid Prototyping Program	04	99,333		99,333	U
99	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	3,781		3,781	U
100	0604673C	Pacific Discriminating Radar	04	95,765		95,765	U
101	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04	3,768		3,768	U
102	0604775D8Z	Defense Rapid Innovation Program	04				U
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	22,435		22,435	U
104	0604873C	Long Range Discrimination Radar (LRDR)	04	164,562		164,562	U
105	0604874C	Improved Homeland Defense Interceptors	04	561,220		561,220	U
106	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	61,017		61,017	U
107	0604878C	Aegis BMD Test	04	95,756		95,756	U
108	0604879C	Ballistic Missile Defense Sensor Test	04	81,001		81,001	U
109	0604880C	Land-Based SM-3 (LBSM3)	04	27,692		27,692	U
110	0604881C	ARGIS SM-3 Block IIA Co-Development	04				U

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111	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	61,350	76,757	76,757			U
112	0604894C	Multi-Object Kill Vehicle	04		6,500	6,500			U
113	0300206R	Enterprise Information Technology Systems	04						U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	2,633	2,902	2,902			U
115	0305103C	Cyber Security Initiative	04	945	986	986			U
116	1206893C	Space Tracking & Surveillance System	04		34,907	34,907			U
117	1206895C	Ballistic Missile Defense System Space Programs	04		16,994	16,994			U
		Advanced Component Development And Prototypes		7,639,450	7,736,741	7,736,741			
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	10,152	12,536	12,536			U
119	0604165D8Z	Prompt Global Strike Capability Development	05	161,100	201,749	201,749			U
120	0604384BP	Chemical and Biological Defense Program - EMD	05	275,806	406,789	406,789			U
121	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	15,691	15,358	15,358			U
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,479	6,241	6,241			U
123	0605013BL	Information Technology Development	05	11,505	12,322	12,322			U
124	0605021SE	Homeland Personnel Security Initiative	05	1,658	4,893	4,893			U

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				FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	
111	0604887C	Ballistic Missile Defense Midcourse Segment Test	04				76,757		76,757 U
112	0604894C	Multi-Object Kill Vehicle	04				6,500		6,500 U
113	0300206R	Enterprise Information Technology Systems	04						U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04				2,902		2,902 U
115	0305103C	Cyber Security Initiative	04				986		986 U
116	1206893C	Space Tracking & Surveillance System	04				34,907		34,907 U
117	1206895C	Ballistic Missile Defense System Space Programs	04	14,000	-14,000		30,994	-14,000	16,994 U
Advanced Component Development And Prototypes				930,600	-930,600		8,667,341	-930,600	7,736,741
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05				12,536		12,536 U
119	0604165D8Z	Prompt Global Strike Capability Development	05				201,749		201,749 U
120	0604384BP	Chemical and Biological Defense Program - EMD	05				406,789		406,789 U
121	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05				15,358		15,358 U
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05				6,241		6,241 U
123	0605013BL	Information Technology Development	05				12,322		12,322 U
124	0605021SE	Homeland Personnel Security Initiative	05				4,893		4,893 U

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111	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	81,934		81,934	U
112	0604894C	Multi-Object Kill Vehicle	04	8,256		8,256	U
113	0300206R	Enterprise Information Technology Systems	04	2,600		2,600	U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	3,104		3,104	U
115	0305103C	Cyber Security Initiative	04	985		985	U
116	1206893C	Space Tracking & Surveillance System	04	36,955		36,955	U
117	1206895C	Ballistic Missile Defense System Space Programs	04	16,484		16,484	U
Advanced Component Development And Prototypes				8,709,725	242,668	8,952,393	
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	8,333		8,333	U
119	0604165D8Z	Prompt Global Strike Capability Development	05	263,414		263,414	U
120	0604384BP	Chemical and Biological Defense Program - EMD	05	388,701		388,701	U
121	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	19,503		19,503	U
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	6,163		6,163	U
123	0605013BL	Information Technology Development	05	11,988		11,988	U
124	0605021SE	Homeland Personnel Security Initiative	05	296		296	U

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125	0605022D8Z	Defense Exportability Program	05	2,853	3,162	3,162			U
126	0605027D8Z	OUSD(C) IT Development Initiatives	05	16,131	21,353	21,353			U
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,661	6,266	6,266			U
128	0605075D8Z	DCMO Policy and Integration	05		2,810	2,810			U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	27,194	24,436	24,436			U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,768	13,475	13,475			U
131	0605140D8Z	Trusted Foundry	05	67,252					U
132	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	8,310	11,870	11,870			U
133	0605294D8Z	Trusted & Assured Microelectronics	05		61,084	61,084			U
134	0303141K	Global Combat Support System	05	7,600	2,576	2,576			U
135	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	2,700	3,669	3,669			U
136	0305310D8Z	CWMD Systems: System Development and Demonstration	05		8,230	8,230			U
		System Development And Demonstration		620,860	818,819	818,819			
137	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	4,672	6,941	6,941			U
138	0604875D8Z	Joint Systems Architecture Development	06	2,948	4,851	4,851			U

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				FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs			Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018	
125	0605022D8Z	Defense Exportability Program	05				3,162		3,162	U
126	0605027D8Z	OUSD(C) IT Development Initiatives	05				21,353		21,353	U
127	0605070S	DOD Enterprise Systems Development and Demonstration	05				6,266		6,266	U
128	0605075D8Z	DCMO Policy and Integration	05				2,810		2,810	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05				24,436		24,436	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05				13,475		13,475	U
131	0605140D8Z	Trusted Foundry	05							U
132	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05				11,870		11,870	U
133	0605294D8Z	Trusted & Assured Microelectronics	05				61,084		61,084	U
134	0303141K	Global Combat Support System	05				2,576		2,576	U
135	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05				3,669		3,669	U
136	0305310D8Z	CWMD Systems: System Development and Demonstration	05				8,230		8,230	U
		System Development And Demonstration					818,819		818,819	
137	0604774D8Z	Defense Readiness Reporting System (DRRS)	06				6,941		6,941	U
138	0604875D8Z	Joint Systems Architecture Development	06				4,851		4,851	U

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125	0605022D8Z	Defense Exportability Program	05	1,489		1,489	U
126	0605027D8Z	OUSD(C) IT Development Initiatives	05	9,590		9,590	U
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,173		3,173	U
128	0605075D8Z	DCMO Policy and Integration	05	2,105		2,105	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	21,156		21,156	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	10,731		10,731	U
131	0605140D8Z	Trusted Foundry	05				U
132	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	6,374		6,374	U
133	0605294D8Z	Trusted & Assured Microelectronics	05	56,178		56,178	U
134	0303141K	Global Combat Support System	05	2,512		2,512	U
135	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	2,435		2,435	U
136	0305310D8Z	CWMD Systems: System Development and Demonstration	05	17,048		17,048	U
		System Development And Demonstration		831,189		831,189	
137	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	6,661		6,661	U
138	0604875D8Z	Joint Systems Architecture Development	06	4,088		4,088	U

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139	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	212,389	211,325	211,325			U
140	0604942D8Z	Assessments and Evaluations	06	27,626	30,144	30,144			U
141	0605001E	Mission Support	06	69,244	63,769	63,769			U
142	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	65,062	91,057	91,057			U
143	0605104D8Z	Technical Studies, Support and Analysis	06	20,300	22,386	22,386			U
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,744	36,581	36,581			U
145	0605128D8Z	Classified Program USD(P)	06	130,000					U
146	0605142D8Z	Systems Engineering	06	31,276	37,622	37,622			U
147	0605151D8Z	Studies and Analysis Support - OSD	06	2,675	5,200	5,200			U
148	0605161D8Z	Nuclear Matters-Physical Security	06	5,101	5,232	5,232			U
149	0605170D8Z	Support to Networks and Information Integration	06	6,996	12,583	12,583			U
150	0605200D8Z	General Support to USD (Intelligence)	06	1,872	31,451	31,451			U
151	0605384BP	Chemical and Biological Defense Program	06	89,172	104,348	104,348			U
152	0605502BP	Small Business Innovative Research - Chemical Biological Def	06	18,426					U
153	0605502BR	Small Business Innovation Research	06	10,456					U

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				FY 2018 Emergency Requests** Emergency	FY 2018 Div B P.L.115-96*** MDDE + Ship Repairs							
139	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06				211,325				211,325	U
140	0604942D8Z	Assessments and Evaluations	06				30,144				30,144	U
141	0605001E	Mission Support	06				63,769				63,769	U
142	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06				91,057				91,057	U
143	0605104D8Z	Technical Studies, Support and Analysis	06				22,386				22,386	U
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06				36,581				36,581	U
145	0605128D8Z	Classified Program USD(P)	06									U
146	0605142D8Z	Systems Engineering	06				37,622				37,622	U
147	0605151D8Z	Studies and Analysis Support - OSD	06				5,200				5,200	U
148	0605161D8Z	Nuclear Matters-Physical Security	06				5,232				5,232	U
149	0605170D8Z	Support to Networks and Information Integration	06				12,583				12,583	U
150	0605200D8Z	General Support to USD (Intelligence)	06	30,000	-30,000		61,451		-30,000		31,451	U
151	0605384BP	Chemical and Biological Defense Program	06				104,348				104,348	U
152	0605502BP	Small Business Innovative Research - Chemical Biological Def	06									U
153	0605502BR	Small Business Innovation Research	06									U

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139	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	258,796		258,796	U
140	0604942D8Z	Assessments and Evaluations	06	31,356		31,356	U
141	0605001E	Mission Support	06	65,646		65,646	U
142	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	84,184		84,184	U
143	0605104D8Z	Technical Studies, Support and Analysis	06	22,576		22,576	U
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	52,565		52,565	U
145	0605128D8Z	Classified Program USD(P)	06				U
146	0605142D8Z	Systems Engineering	06	38,872		38,872	U
147	0605151D8Z	Studies and Analysis Support - OSD	06	3,534		3,534	U
148	0605161D8Z	Nuclear Matters-Physical Security	06	5,050		5,050	U
149	0605170D8Z	Support to Networks and Information Integration	06	11,450		11,450	U
150	0605200D8Z	General Support to USD (Intelligence)	06	1,693		1,693	U
151	0605384BP	Chemical and Biological Defense Program	06	102,883		102,883	U
152	0605502BP	Small Business Innovative Research - Chemical Biological Def	06				U
153	0605502BR	Small Business Innovation Research	06				U

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Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
154	0605502C	Small Business Innovation Research - MDA	06	86,742					U
155	0605502D8Z	Small Business Innovative Research	06	84,770					U
156	0605502E	Small Business Innovative Research	06	94,860					U
157	0605502S	Small Business Innovative Research	06	4,554					U
158	0605502T	Small Business Innovative Research	06	349					U
159	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,185	2,372	2,372			U
160	0605798D8Z	Defense Technology Analysis	06	24,965	24,365	24,365			U
161	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	54,145	54,145			U
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	15,230	30,356	30,356			U
163	0605804D8Z	Development Test and Evaluation	06	20,822	20,571	20,571			U
164	0605898E	Management HQ - R&D	06	3,859	14,017	14,017			U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,187	4,187			U
166	0606100D8Z	Budget and Program Assessments	06	3,863	3,992	3,992			U
167	0606225D8Z	ODNA Technology and Resource Analysis	06		1,000	1,000			U
168	0606589D8W	Defense Digital Service (DDS) Development Support	06						U

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154	0605502C	Small Business Innovation Research - MDA	06							U
155	0605502D8Z	Small Business Innovative Research	06							U
156	0605502E	Small Business Innovative Research	06							U
157	0605502S	Small Business Innovative Research	06							U
158	0605502T	Small Business Innovative Research	06							U
159	0605790D8Z	Small Business Innovation Research (SBIR) / Small Business Technology Transfer	06				2,372		2,372	U
160	0605798D8Z	Defense Technology Analysis	06				24,365		24,365	U
161	0605801KA	Defense Technical Information Center (DTIC)	06				54,145		54,145	U
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06				30,356		30,356	U
163	0605804D8Z	Development Test and Evaluation	06				20,571		20,571	U
164	0605898E	Management HQ - R&D	06				14,017		14,017	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06				4,187		4,187	U
166	0606100D8Z	Budget and Program Assessments	06				3,992		3,992	U
167	0606225D8Z	ODNA Technology and Resource Analysis	06				1,000		1,000	U
168	0606589D8W	Defense Digital Service (DDS) Development Support	06							U

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154	0605502C	Small Business Innovation Research - MDA	06				U
155	0605502D8Z	Small Business Innovative Research	06				U
156	0605502E	Small Business Innovative Research	06				U
157	0605502S	Small Business Innovative Research	06				U
158	0605502T	Small Business Innovative Research	06				U
159	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,545		2,545	U
160	0605798D8Z	Defense Technology Analysis	06	24,487		24,487	U
161	0605801KA	Defense Technical Information Center (DTIC)	06	56,853		56,853	U
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	24,914		24,914	U
163	0605804D8Z	Development Test and Evaluation	06	20,179		20,179	U
164	0605898E	Management HQ - R&D	06	13,643		13,643	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,124		4,124	U
166	0606100D8Z	Budget and Program Assessments	06	5,768		5,768	U
167	0606225D8Z	ODNA Technology and Resource Analysis	06	1,030		1,030	U
168	0606589D8W	Defense Digital Service (DDS) Development Support	06	1,000		1,000	U

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169	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06						U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06						U
171	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	2,070	2,551	2,551			U
172	0204571J	Joint Staff Analytical Support	06	5,462	7,712	7,712			U
175	0303166J	Support to Information Operations (IO) Capabilities	06	857	673	673			U
176	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	843	1,006	1,006			U
177	0305172K	Combined Advanced Applications	06	12,200	16,998	16,998			U
178	0305193D8Z	Cyber Intelligence	06	10,511					U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06		18,992	18,992			U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06		1,231	1,231			U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06	29,149					U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06		44,500	44,500			U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06						U

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169	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06							U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06							U
171	0203345D8Z	Defense Operations Security Initiative (DOSI)	06				2,551		2,551	U
172	0204571J	Joint Staff Analytical Support	06				7,712		7,712	U
175	0303166J	Support to Information Operations (IO) Capabilities	06				673		673	U
176	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06				1,006		1,006	U
177	0305172K	Combined Advanced Applications	06				16,998		16,998	U
178	0305193D8Z	Cyber Intelligence	06							U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06				18,992		18,992	U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06				1,231		1,231	U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06							U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				44,500		44,500	U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06							U

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
169	0606942C	Assessments and Evaluations Cyber Vulnerabilities	06	3,400		3,400	U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06	4,000		4,000	U
171	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	3,008		3,008	U
172	0204571J	Joint Staff Analytical Support	06	6,658		6,658	U
175	0303166J	Support to Information Operations (IO) Capabilities	06	652		652	U
176	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	1,005		1,005	U
177	0305172K	Combined Advanced Applications	06	21,363		21,363	U
178	0305193D8Z	Cyber Intelligence	06				U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06	109,529		109,529	U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06	1,244		1,244	U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06	42,940		42,940	U

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185	0901598C	Management HQ - MDA	06	30,693	29,947	29,947			U
186	0903235D8W	Joint Service Provider (JSP)	06	768					U
187	0903235K	Joint Service Provider (JSP)	06		5,113	5,113			U
188	0909999D8Z	Financing for Cancelled Account Adjustments	06	437					U
9999	9999999999	Classified Programs		58,399	63,312	63,312			U
		Management Support		1,272,781	1,010,530	1,010,530			
189	0604130V	Enterprise Security System (ESS)	07	4,241	4,565	4,565			U
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,374	1,871	1,871			U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	277	298	298			U
192	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	15,584	10,882	10,882			U
193	0607310D8Z	CWMD Systems: Operational Systems Development	07	4,035	7,222	7,222			U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,572	14,450	14,450			U
195	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	32,213	45,677	45,677			U
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,036	3,037	3,037			U
197	0208045K	C4I Interoperability	07	56,481	59,490	59,490			U

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Line	Program Element No Number	Item	Act	FY 2018 Emergency Requests** Emergency	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
185	0901598C	Management HQ - MDA	06				29,947		29,947	U
186	0903235D8W	Joint Service Provider (JSP)	06							U
187	0903235K	Joint Service Provider (JSP)	06				5,113		5,113	U
188	0909999D8Z	Financing for Cancelled Account Adjustments	06							U
9999	9999999999	Classified Programs					63,312		63,312	U
		Management Support		30,000	-30,000		1,040,530	-30,000	1,010,530	
189	0604130V	Enterprise Security System (ESS)	07				4,565		4,565	U
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07				1,871		1,871	U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07				298		298	U
192	0607210D8Z	Industrial Base Analysis and Sustainment Support	07				10,882		10,882	U
193	0607310D8Z	CWMD Systems: Operational Systems Development	07				7,222		7,222	U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07				14,450		14,450	U
195	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07				45,677		45,677	U
196	0208043J	Planning and Decision Aid System (PDAS)	07				3,037		3,037	U
197	0208045K	C4I Interoperability	07				59,490		59,490	U

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
185	0901598C	Management HQ - MDA	06	28,626		28,626	U
186	0903235D8W	Joint Service Provider (JSP)	06				U
187	0903235K	Joint Service Provider (JSP)	06	5,104		5,104	U
188	0909999D8Z	Financing for Cancelled Account Adjustments	06				U
9999	9999999999	Classified Programs		45,604		45,604	U
		Management Support		1,117,030		1,117,030	
189	0604130V	Enterprise Security System (ESS)	07	9,750		9,750	U
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,855		1,855	U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	304		304	U
192	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	10,376		10,376	U
193	0607310D8Z	CWMD Systems: Operational Systems Development	07	5,915		5,915	U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	5,869		5,869	U
195	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	48,741		48,741	U
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,037		3,037	U
197	0208045K	C4I Interoperability	07	62,814		62,814	U

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Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
199	0301144K	Joint/Allied Coalition Information Sharing	07	5,464	6,104	6,104			U
202	0302016K	National Military Command System-Wide Support	07	575	1,863	1,863			U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,427	21,564	21,564			U
204	0303126K	Long-Haul Communications - DCS	07	14,861	15,428	15,428			U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,316	15,855	15,855			U
206	0303135G	Public Key Infrastructure (PKI)	07	34,314	4,811	4,811			U
207	0303136G	Key Management Infrastructure (KMI)	07	36,602	33,746	33,746			U
208	0303140D8Z	Information Systems Security Program	07	8,560	9,415	9,415			U
209	0303140G	Information Systems Security Program	07	161,068	227,652	227,652			U
210	0303140K	Information Systems Security Program	07						U
211	0303150K	Global Command and Control System	07	21,438	42,687	42,687			U
212	0303153K	Defense Spectrum Organization	07	12,686	8,750	8,750			U
213	0303228K	Joint Information Environment (JIE)	07	2,789	4,689	4,689			U
214	0303267K	Auctioned Spectrum Relocation Fund	07	11,313					U
215	0303430K	Federal Investigative Services Information Technology	07	75,000	50,000	50,000			U
216	0303610K	Teleport Program	07	657					U
219	0305103K	Cyber Security Initiative	07	1,553	1,686	1,686			U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
199	0301144K	Joint/Allied Coalition Information Sharing	07				6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07				1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07				21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07				15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07				15,855		15,855	U
206	0303135G	Public Key Infrastructure (PKI)	07				4,811		4,811	U
207	0303136G	Key Management Infrastructure (KMI)	07				33,746		33,746	U
208	0303140D8Z	Information Systems Security Program	07				9,415		9,415	U
209	0303140G	Information Systems Security Program	07				227,652		227,652	U
210	0303140K	Information Systems Security Program	07							U
211	0303150K	Global Command and Control System	07				42,687		42,687	U
212	0303153K	Defense Spectrum Organization	07				8,750		8,750	U
213	0303228K	Joint Information Environment (JIE)	07				4,689		4,689	U
214	0303267K	Auctioned Spectrum Relocation Fund	07							U
215	0303430K	Federal Investigative Services Information Technology	07				50,000		50,000	U
216	0303610K	Teleport Program	07							U
219	0305103K	Cyber Security Initiative	07				1,686		1,686	U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	S e c
199	0301144K	Joint/Allied Coalition Information Sharing	07				U
202	0302016K	National Military Command System-Wide Support	07				U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	16,561		16,561	U
204	0303126K	Long-Haul Communications - DCS	07	14,769		14,769	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	17,579		17,579	U
206	0303135G	Public Key Infrastructure (PKI)	07				U
207	0303136G	Key Management Infrastructure (KMI)	07	31,737		31,737	U
208	0303140D8Z	Information Systems Security Program	07	7,940		7,940	U
209	0303140G	Information Systems Security Program	07	229,252		229,252	U
210	0303140K	Information Systems Security Program	07	19,611		19,611	U
211	0303150K	Global Command and Control System	07	46,900		46,900	U
212	0303153K	Defense Spectrum Organization	07	7,570		7,570	U
213	0303228K	Joint Information Environment (JIE)	07	7,947		7,947	U
214	0303267K	Auctioned Spectrum Relocation Fund	07				U
215	0303430K	Federal Investigative Services Information Technology	07	39,400		39,400	U
216	0303610K	Teleport Program	07				U
219	0305103K	Cyber Security Initiative	07				U

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Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
224	0305186D8Z	Policy R&D Programs	07	3,120	6,526	6,526			U
225	0305199D8Z	Net Centricity	07	17,357	18,455	18,455			U
227	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,496	5,496			U
230	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,049	3,049			U
233	0305327V	Insider Threat	07	5,034	5,365	5,365			U
234	0305387D8Z	Homeland Defense Technology Transfer Program	07	7,052	2,071	2,071			U
240	0307577D8Z	Intelligence Mission Data (IMD)	07	13,485	13,111	13,111			U
241	0708011S	Industrial Preparedness	07	15,984					U
242	0708012K	Logistics Support Activities	07						U
243	0708012S	Pacific Disaster Centers	07	1,690	1,770	1,770			U
244	0708047S	Defense Property Accountability System	07	2,075	2,924	2,924			U
245	0902298J	Management HQ - OJCS	07	826					U
246	1105219BB	MQ-9 UAV	07	17,155	37,863	37,863			U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	17,633					U
248	1160403BB	Aviation Systems	07	156,054	259,886	259,886			U
249	1160405BB	Intelligence Systems Development	07	5,803	8,245	8,245			U
250	1160408BB	Operational Enhancements	07	52,495	79,455	79,455	1,920	1,920	U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
224	0305186D8Z	Policy R&D Programs	07				6,526		6,526	U
225	0305199D8Z	Net Centricity	07				18,455		18,455	U
227	0305208BB	Distributed Common Ground/Surface Systems	07				5,496		5,496	U
230	0305208K	Distributed Common Ground/Surface Systems	07				3,049		3,049	U
233	0305327V	Insider Threat	07				5,365		5,365	U
234	0305387D8Z	Homeland Defense Technology Transfer Program	07				2,071		2,071	U
240	0307577D8Z	Intelligence Mission Data (IMD)	07				13,111		13,111	U
241	0708011S	Industrial Preparedness	07							U
242	0708012K	Logistics Support Activities	07							U
243	0708012S	Pacific Disaster Centers	07				1,770		1,770	U
244	0708047S	Defense Property Accountability System	07				2,924		2,924	U
245	0902298J	Management HQ - OJCS	07							U
246	1105219BB	MQ-9 UAV	07				37,863		37,863	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07							U
248	1160403BB	Aviation Systems	07				259,886		259,886	U
249	1160405BB	Intelligence Systems Development	07				8,245		8,245	U
250	1160408BB	Operational Enhancements	07				81,375		81,375	U

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
224	0305186D8Z	Policy R&D Programs	07	6,262		6,262	U
225	0305199D8Z	Net Centricity	07	16,780		16,780	U
227	0305208BB	Distributed Common Ground/Surface Systems	07	6,286		6,286	U
230	0305208K	Distributed Common Ground/Surface Systems	07	2,970		2,970	U
233	0305327V	Insider Threat	07	5,954		5,954	U
234	0305387D8Z	Homeland Defense Technology Transfer Program	07	2,198		2,198	U
240	0307577D8Z	Intelligence Mission Data (IMD)	07	6,889		6,889	U
241	0708011S	Industrial Preparedness	07				U
242	0708012K	Logistics Support Activities	07	1,317		1,317	U
243	0708012S	Pacific Disaster Centers	07	1,770		1,770	U
244	0708047S	Defense Property Accountability System	07	1,805		1,805	U
245	0902298J	Management HQ - OJCS	07				U
246	1105219BB	MQ-9 UAV	07	18,403		18,403	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07				U
248	1160403BB	Aviation Systems	07	184,993		184,993	U
249	1160405BB	Intelligence Systems Development	07	10,625		10,625	U
250	1160408BB	Operational Enhancements	07	102,307	3,632	105,939	U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
251	1160431BB	Warrior Systems	07	67,086	45,935	45,935			U
252	1160432BB	Special Programs	07	2,267	1,978	1,978			U
253	1160434BB	Unmanned ISR	07	19,110	31,766	31,766	3,000	3,000	U
254	1160480BB	SOF Tactical Vehicles	07	3,211	2,578	2,578			U
255	1160483BB	Maritime Systems	07	52,199	42,315	42,315			U
256	1160489BB	Global Video Surveillance Activities	07	3,841	4,661	4,661			U
257	1160490BB	Operational Enhancements Intelligence	07	12,034	12,049	12,049			U
258	1203610K	Teleport Program	07		642	642			U
9999	9999999999	Classified Programs		3,552,208	3,689,646	3,689,646	196,176	196,176	U
		Operational System Development		4,578,600	4,867,528	4,867,528	201,096	201,096	
259	0901560D	Continuing Resolution Programs	20		-1,851,661	-1,851,661	216,008	216,008	U
		Undistributed			-1,851,661	-1,851,661	216,008	216,008	
Total Research, Development, Test & Eval, DW				19,542,639	18,639,241	18,639,241	442,104	442,104	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018		FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018		FY 2018 Remaining Req with CR Adj Base + OCO + Emergency c
				FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs			Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	
251	1160431BB	Warrior Systems	07				45,935			45,935 U
252	1160432BB	Special Programs	07				1,978			1,978 U
253	1160434BB	Unmanned ISR	07				34,766			34,766 U
254	1160480BB	SOF Tactical Vehicles	07				2,578			2,578 U
255	1160483BB	Maritime Systems	07				42,315			42,315 U
256	1160489BB	Global Video Surveillance Activities	07				4,661			4,661 U
257	1160490BB	Operational Enhancements Intelligence	07				12,049			12,049 U
258	1203610K	Teleport Program	07				642			642 U
9999	9999999999	Classified Programs		44,620	-44,620		3,930,442	-44,620		3,885,822 U
		Operational System Development					5,113,244			5,068,624
259	0901560D	Continuing Resolution Programs	20				-1,635,653			-1,635,653 U
		Undistributed					-1,635,653			-1,635,653
Total Research, Development, Test & Eval, DW				1,010,220	-1,010,220		20,091,565	-1,010,220		19,081,345

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
251	1160431BB	Warrior Systems	07	46,942	11,040	57,982	U
252	1160432BB	Special Programs	07	2,479		2,479	U
253	1160434BB	Unmanned ISR	07	27,270	11,700	38,970	U
254	1160480BB	SOF Tactical Vehicles	07	1,121	725	1,846	U
255	1160483BB	Maritime Systems	07	42,471		42,471	U
256	1160489BB	Global Video Surveillance Activities	07	4,780		4,780	U
257	1160490BB	Operational Enhancements Intelligence	07	12,176		12,176	U
258	1203610K	Teleport Program	07	2,323		2,323	U
9999	9999999999	Classified Programs		3,753,840	316,189	4,070,029	U
		Operational System Development		4,849,888	343,286	5,193,174	
259	0901560D	Continuing Resolution Programs	20				U
		Undistributed					
Total Research, Development, Test & Eval, DW				21,892,495	624,602	22,517,097	

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Operational Test & Eval, Defense	188,654	184,666	184,666	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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Appropriation	FY 2018		FY 2018		FY 2018	
	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Operational Test & Eval, Defense				187,391		187,391
Total Research, Development, Test & Evaluation				187,391		187,391

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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Operational Test & Eval, Defense	221,009		221,009
Total Research, Development, Test & Evaluation	221,009		221,009

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Management Support	188,654	210,900	210,900		
Undistributed		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725
<u>Summary Recap of FYDP Programs</u>					
Research and Development	188,654	210,900	210,900		
Administration and Associated Activities		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency
Summary Recap of Budget Activities					
Management Support			210,900		210,900
Undistributed			-23,509		-23,509
Total Research, Development, Test & Evaluation			187,391		187,391
Summary Recap of FYDP Programs					
Research and Development			210,900		210,900
Administration and Associated Activities			-23,509		-23,509
Total Research, Development, Test & Evaluation			187,391		187,391

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support	221,009		221,009
Undistributed			
Total Research, Development, Test & Evaluation	221,009		221,009
Summary Recap of FYDP Programs			
Research and Development	221,009		221,009
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	221,009		221,009

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Management Support	188,654	210,900	210,900		
Undistributed		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725
<u>Summary Recap of FYDP Programs</u>					
Research and Development	188,654	210,900	210,900		
Administration and Associated Activities		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Management Support				210,900		210,900
Undistributed				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391
<u>Summary Recap of FYDP Programs</u>						
Research and Development				210,900		210,900
Administration and Associated Activities				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support	221,009		221,009
Undistributed			
Total Research, Development, Test & Evaluation	221,009		221,009
Summary Recap of FYDP Programs			
Research and Development	221,009		221,009
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	221,009		221,009

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Appropriation: 0460D Operational Test & Eval, Defense

Program Line Element No Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
1 06051180TE	Operational Test and Evaluation	06	80,772	83,503	83,503			U
2 06051310TE	Live Fire Test and Evaluation	06	48,316	59,500	59,500			U
3 06058140TE	Operational Test Activities and Analyses	06	59,566	67,897	67,897			U
	Management Support		188,654	210,900	210,900			
4 09015600TE	Continuing Resolution Programs	20		-26,234	-26,234	2,725	2,725	U
	Undistributed			-26,234	-26,234	2,725	2,725	
Total Operational Test & Eval, Defense			188,654	184,666	184,666	2,725	2,725	

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Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2018		FY 2018 Remaining Req Emergency	FY 2018		FY 2018 Remaining Req Emergency
				FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	
1	06051180TE	Operational Test and Evaluation	06				83,503		83,503 U
2	06051310TE	Live Fire Test and Evaluation	06				59,500		59,500 U
3	06058140TE	Operational Test Activities and Analyses	06				67,897		67,897 U
		Management Support					210,900		210,900
4	09015600TE	Continuing Resolution Programs	20				-23,509		-23,509 U
		Undistributed					-23,509		-23,509
Total Operational Test & Eval, Defense							187,391		187,391

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Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
1	06051180TE	Operational Test and Evaluation	06	85,685		85,685	U
2	06051310TE	Live Fire Test and Evaluation	06	64,332		64,332	U
3	06058140TE	Operational Test Activities and Analyses	06	70,992		70,992	U
		Management Support		221,009		221,009	
4	09015600TE	Continuing Resolution Programs	20				U
		Undistributed					
Total Operational Test & Eval, Defense				221,009		221,009	

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW					
Total Research, Development, Test & Evaluation					

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<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>
<u>Emergency</u>	<u>Less Enacted</u>	<u>Total</u>	<u>Less Enacted</u>	<u>Remaining Req</u>
<u>Requests**</u>	<u>Div B</u>	<u>PB Requests*</u>	<u>DIV B</u>	<u>with CR Adj</u>
<u>Emergency</u>	<u>P.L.115-96***</u>	<u>with CR Adj</u>	<u>P.L.115-96***</u>	<u>Base + OCO +</u>
	<u>MDDE + Ship</u>	<u>Emergency</u>	<u>MDDE + Ship</u>	<u>Emergency</u>
	<u>Repairs</u>		<u>Repairs</u>	

Research, Development, Test & Eval, DW

Total Research, Development, Test & Evaluation

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<u>Appropriation</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Research, Development, Test & Eval, DW	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Component Development And Prototypes					
Total Research, Development, Test & Evaluation					
<u>Summary Recap of FYDP Programs</u>					
Intelligence and Communications					
Total Research, Development, Test & Evaluation					

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	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities					

Advanced Component Development And Prototypes

Total Research, Development, Test & Evaluation

Summary Recap of FYDP Programs

Intelligence and Communications

Total Research, Development, Test & Evaluation

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<u>Summary Recap of Budget Activities</u>	<u>FY 2019</u>	<u>FY 2019</u>	<u>FY 2019</u>
	<u>Base</u>	<u>OCO</u>	<u>Total</u>
<u>Advanced Component Development And Prototypes</u>	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600
<u>Summary Recap of FYDP Programs</u>			
<u>Intelligence and Communications</u>	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
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Summary Recap of Budget Activities

Advanced Component Development And Prototypes

Total Research, Development, Test & Evaluation

Summary Recap of FYDP Programs

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Total Research, Development, Test & Evaluation

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Summary Recap of Budget Activities

	FY 2018 Less Enacted		FY 2018 Total	FY 2018 Less Enacted	FY 2018 Remaining Req
	FY 2018 Emergency Requests**	Div B P.L.115-96*** MDDE + Ship Repairs	PB Requests* with CR Adj Base + OCO + Emergency**	Div B P.L.115-96*** MDDE + Ship Repairs	with CR Adj Base + OCO + Emergency
Advanced Component Development And Prototypes					
Total Research, Development, Test & Evaluation					
Summary Recap of FYDP Programs					
Intelligence and Communications					
Total Research, Development, Test & Evaluation					

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<u>Summary Recap of Budget Activities</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Advanced Component Development And Prototypes	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600
<u>Summary Recap of FYDP Programs</u>			
Intelligence and Communications	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
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Total Research, Development, Test & Evaluation

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FY 2019 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

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	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Less Enacted	Total	Less Enacted	Remaining Req	
	Div B	PB Requests*	DIV B	with CR Adj	with CR Adj
	P.L.115-96***	with CR Adj	P.L.115-96***	Base + OCO +	Base + OCO +
	MDDE + Ship	Emergency	MDDE + Ship	Emergency**	Emergency
	Repairs	Emergency	Repairs	Emergency**	Emergency
Appropriation					

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<u>Appropriation</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Defense Contract Audit Agency	2,600		2,600
Total Research, Development, Test & Evaluation	2,600		2,600

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Total Obligational Authority

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Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ OCO	S e c
113	0300206R	Enterprise Information Technology Systems	04						U
Advanced Component Development And Prototypes									
Total Research, Development, Test & Eval, DW									

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Line	Program Element No Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency	
113	0300206R	Enterprise Information Technology Systems	04							U
Advanced Component Development And Prototypes										
Total Research, Development, Test & Eval, DW										

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
113	0300206R	Enterprise Information Technology Systems	04	2,600		2,600	U
Advanced Component Development And Prototypes				2,600		2,600	
Total Research, Development, Test & Eval, DW				2,600		2,600	

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(Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017	FY 2018	FY 2018	FY 2018	S
				(Base + OCO)	PB Request with CR Adj Base	Total PB Requests* with CR Adj Base	PB Request with CR Adj OCO	
113	0300206R	Enterprise Information Technology Systems	04					U
		Advanced Component Development And Prototypes						
Total Defense Contract Audit Agency								

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2018		FY 2018	FY 2018	FY 2018	FY 2018	S
				Emergency	Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**		
113	0300206R	Enterprise Information Technology Systems	04							U
		Advanced Component Development And Prototypes								
Total Defense Contract Audit Agency										

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
113	0300206R	Enterprise Information Technology Systems	04	2,600		2,600	U
		Advanced Component Development And Prototypes		2,600		2,600	
		Total Defense Contract Audit Agency		2,600		2,600	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Contract Audit Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> / BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0300206R / <i>Enterprise Information Technology System</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	2.600	-	2.600	1.600	1.600	1.700	1.700	Continuing	Continuing
000001: <i>Enterprise Information Technology System</i>	-	0.000	0.000	2.600	-	2.600	1.600	1.600	1.700	1.700	Continuing	Continuing

A. Mission Description and Budget Item Justification

This is a new start in FY19. Funding in the amount of \$2,600,000 is required for the software development of a prototype capability to streamline the assembly, transmission, routing, processing, and tracking of the large volume of contractor submissions received annually by the federal government which will become CSP (Contractor Submission Portal) as well as DCAA Management Information System (DMIS) replacement analysis and the System of Systems redesign.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	2.600	-	2.600
Total Adjustments	0.000	0.000	2.600	-	2.600
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other	-	-	2.600	-	2.600

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 000001: *Enterprise Information Technology System*

Congressional Add: *N/A*

	FY 2017	FY 2018
Congressional Add Subtotals for Project: 000001	0.000	-
Congressional Add Totals for all Projects	0.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Audit Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0300206R / <i>Enterprise Information Technology System</i>	Project (Number/Name) 000001 / <i>Enterprise Information Technology System</i>
--	---	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000001: <i>Enterprise Information Technology System</i>	-	0.000	0.000	2.600	-	2.600	1.600	1.600	1.700	1.700	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This is a new start in FY19. Funding in the amount of \$2,600,000 is required for the software development of a prototype capability to streamline the assembly, transmission, routing, processing, and tracking of the large volume of contractor submissions received annually by the federal government which will become CSP (Contractor Submission Portal) as well as DMIS replacement analysis and the System of Systems redesign.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Enterprise Information Technology System	0.000	-	2.600
FY 2019 Plans:			
- Develop CSP (Contractor Submission portal) requirements and design the technical architecture that will support the CSP business and technical requirements			
- Lead the software development and testing of an initial CSP prototype			
- Deploy the initial CSP prototype in a web environment accessible to the public			
- Develop the SoS (System of System) design requirements and translate business requirements into technical requirements			
- Collaborate with the Government in the development of mock-ups and demonstrations			
- Develop and test the refined SoS prototype			
-- Conduct unit testing, system testing, user acceptance testing, and other software testing in order to ensure functionality meets all requirements			
- Produce SoS Planning module and the assignment module Intranet Functional and Technical Design			
FY 2018 to FY 2019 Increase/Decrease Statement:			
This is a new requirement starting in FY 19.			
Accomplishments/Planned Programs Subtotals	0.000	-	2.600

	FY 2017	FY 2018
Congressional Add: N/A	0.000	-
FY 2017 Accomplishments: N/A		
Congressional Adds Subtotals	0.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Audit Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0300206R / <i>Enterprise Information Technology System</i>	Project (Number/Name) 000001 / <i>Enterprise Information Technology System</i>

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
N/A

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation	FY 2018		FY 2018	FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW			12,322		12,322
Total Research, Development, Test & Evaluation			12,322		12,322

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

02 Feb 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988

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Department of Defense
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
System Development And Demonstration	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		

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 (Dollars in Thousands)

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities						

System Development And Demonstration				12,322		12,322
Total Research, Development, Test & Evaluation				12,322		12,322
Summary Recap of FYDP Programs						

Research and Development				12,322		12,322
Total Research, Development, Test & Evaluation				12,322		12,322

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 (Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988
Summary Recap of FYDP Programs			
Research and Development	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988

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 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
System Development And Demonstration	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		
Summary Recap of FYDP Programs					
Research and Development	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities						

System Development And Demonstration				12,322		12,322
Total Research, Development, Test & Evaluation				12,322		12,322
Summary Recap of FYDP Programs						

Research and Development				12,322		12,322
Total Research, Development, Test & Evaluation				12,322		12,322

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Total Obligational Authority
(Dollars in Thousands)

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Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988
 Summary Recap of FYDP Programs -----			
Research and Development	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO

Defense Contract Management Agency	11,505	12,322	12,322		
Total Research, Development, Test & Evaluation	11,505	12,322	12,322		

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Appropriation	FY 2018		FY 2018	FY 2018		FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency
Defense Contract Management Agency				12,322		12,322
Total Research, Development, Test & Evaluation				12,322		12,322

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Defense Contract Management Agency	11,988		11,988
Total Research, Development, Test & Evaluation	11,988		11,988

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
123	0605013BL	Information Technology Development	05	11,505	12,322	12,322			U
		System Development And Demonstration		11,505	12,322	12,322			
Total Research, Development, Test & Eval, DW				11,505	12,322	12,322			

R-119PB: FY 2019 President's Budget (Published Version), as of February 2, 2018 at 08:55:04

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(Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
123	0605013BL	Information Technology Development	05				12,322	
		System Development And Demonstration					12,322	
Total Research, Development, Test & Eval, DW							12,322	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
123	0605013BL	Information Technology Development	05	11,988		11,988	U
		System Development And Demonstration		11,988		11,988	
Total Research, Development, Test & Eval, DW				11,988		11,988	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO	S
123	0605013BL	Information Technology Development	05	11,505	12,322	12,322			U
		System Development And Demonstration		11,505	12,322	12,322			
Total Defense Contract Management Agency				11,505	12,322	12,322			

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	S	
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		Remaining Req with CR Adj Base + OCO + Emergency
123	0605013BL	Information Technology Development	05	-----	-----	-----	12,322	-----	12,322	U
		System Development And Demonstration		-----	-----	-----	12,322	-----	12,322	
Total Defense Contract Management Agency				-----	-----	-----	12,322	-----	12,322	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
123	0605013BL	Information Technology Development	05	11,988		11,988	U
		System Development And Demonstration		11,988		11,988	
Total Defense Contract Management Agency				11,988		11,988	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Contract Management Agency **Date:** February 2018

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>					PE 0605013BL / <i>Information Technology Development</i>							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	158.343	11.505	12.322	11.988	-	11.988	12.122	12.230	12.390	12.638	Continuing	Continuing
01: <i>Systems Modifications and Development</i>	158.343	11.505	12.322	11.988	-	11.988	12.122	12.230	12.390	12.638	Continuing	Continuing

A. Mission Description and Budget Item Justification

The DCMA utilizes an agile incremental approach for system development, modernization, and sustainment allowing the DCMA to deploy needed systems and major business process changes. Through major initiatives like the Mechanization of Contract Administration Services (MOCAS) modernization, Integrated Workflow Management System (IWMS), and Talent Management System (TMS) the DCMA will reduce risk, improve performance, and enhance the competency of the acquisition workforce. These systems support the DCMA congressionally-mandated emerging missions focused on mission assurance and commercial item pricing. Furthermore, we are invigorating our efforts to adjust to the changing environment by achieving and sustaining audit readiness, creating an agile and flexible learning organization/culture, and optimizing mission execution to support the acquisition enterprise through agile business practices.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	11.505	12.322	11.988	-	11.988
Current President's Budget	11.505	12.322	11.988	-	11.988
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Management Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>				Project (Number/Name) 01 / <i>Systems Modifications and Development</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: <i>Systems Modifications and Development</i>	158.343	11.505	12.322	11.988	-	11.988	12.122	12.230	12.390	12.638	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DCMA utilizes an agile incremental approach for system development, modernization, and sustainment allowing the DCMA to deploy needed systems and major business process changes. Through major initiatives like the Mechanization of Contract Administration Services (MOCAS) modernization, Integrated Workflow Management System (IWMS), and Talent Management System (TMS) the DCMA will reduce risk, improve performance, and enhance the competency of the acquisition workforce. These systems support the DCMA congressionally-mandated emerging missions focused on mission assurance and commercial item pricing. Furthermore, we are invigorating our efforts to adjust to the changing environment by achieving and sustaining audit readiness, creating an agile and flexible learning organization/culture, and optimizing mission execution to support the acquisition enterprise through agile business practices.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: System Modifications and Development	11.505	12.322	11.988
Description: The DCMA utilizes an agile incremental approach for system development, modernization, and sustainment allowing the DCMA to deploy needed systems and major business process changes. Through major initiatives like the Mechanization of Contract Administration Services (MOCAS) modernization, Integrated Workflow Management System (IWMS), Talent Management System (TMS) and other Business intelligence activities the DCMA will reduce risk, improve performance, and enhance the competency of the acquisition workforce.			
FY 2018 Plans: MOCAS In FY 2018 the Mechanization of Contract Administration Services (MOCAS) Joint Program Management Office (JPMO) will focus on establishing the conceptual design and transition plan for a modernized MOCAS technical architecture based on a transition strategy developed in the end of FY 2017. The JPMO intends to utilize principals of the Federal Segment Architecture Methodology (FSAM) to iteratively modernize the legacy MOCAS core mission, business service, and enterprise service architectures. In parallel, Single Line of Accounting (SLOA) coding and testing will be completed. The Procurement Defense Standards (PDS)/Procurement Instrument Identifiers (PIID) data standards will be finalized and fully implemented as well. Lastly, the JPMO intends to establish a prototyping and testing lab consisting of servers, storage, and networking hardware to evaluate improved MOCAS technical architecture segments in accordance with the approved conceptual design and transition plan.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Management Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>IWMS The Integrated Workload Management System (IWMS) will add development and deployment of automated and semi-automated enterprise-wide functionally-integrated contract review, Financial Improvement and Audit Readiness (FIAR) audit management, and contract administration surveillance planning and execution capabilities throughout DCMA and begin development of contract close-out capabilities by 4th QTR FY 2018.</p> <p>TMS In FY 2018, DCMA's Talent Management System (TMS) Increment 2B will be deployed to 12,000 plus DCMA users while simultaneously transitioning all data and content off of the old stove piped All Training Frame Work (ATFW) system into the new TMS system. This Increment addresses needed production updates, simplifies workflows, develops Tag libraries to reduce html clutter, and provides vendor management and travel management capabilities. TMS will be intergraded with the Acquisition Workforce Qualification Initiative (AWQI) focused on on-the-job development for individuals' needs and the ability to view skill gaps at an organization level allowing for development of mitigation planning for systemic gaps. Increment 2B is scheduled to deploy the end of FY 2018 due to the need to bring on a new contract for further development. DCMA IT will also plan to position TMS as stand-alone infrastructure improving accessibility, security, and performance for DCMA's fully integrated training system.</p> <p>EVAS Earned Value Analysis System (EVAS) will continue its partnership with industry to maintain standardized Earned Value (EV) metrics and protocols. EVAS plans to execute a Commercial Off The Shelf (COTs) software configuration and deployment utilizing baseline EV metrics while performing and completing Increments 1, 2, 3, & 4 of configuration and testing. Initial Operational Capability (IOC) is scheduled for 2nd QTR FY 2018. IOC consists of the COTS software solution fully configured, tested, and deployed on a DCMA EV Data Analysis laptop with EV automated metrics and protocols available to DCMA Earned Value Management specialists. EVAS will use the remainder of FY18 to deploy to the EV community/field throughout DCMA.</p> <p>Asset and Service Management The DCMA is consolidating this cost category item into a new cost category item entitled "Business Intelligence Modernization" which will continue to modernize its Information Technology and Service Management (ITSM) capabilities to fall in line with the NDAA software asset and assurance mandates. In addition, the effort continues to align DCMA's Information Technology Business intelligence processes and capabilities with systems that can execute Information Technology Infrastructure Library (ITIL) best practices .</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Management Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
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<p>Supply Chain Risk Assessment System DCMA is consolidating this cost category item into a new cost category item entitled "Business Intelligence (BI) Modernization" and will continue development and upgrading for the Supply Chain Risk Assessment System's BI and reporting capabilities for better informed acquisition insight and process improvement.</p> <p>Modifications & Delivery Orders (MDO) DCMA is consolidating this cost category item into a new cost category item entitled "Business Intelligence (BI) Modernization" MDO and will continue to improve mass modification and related CARs efficiency, further reducing manual contract intervention. Among the planned objectives are Accounting Classification Reference Number (ACRN) functionality improvements, elevated ACO privileges and controls, and Federal Procurement Data System (FPDS) CAR data feed improvements.</p> <p>Other Programs DCMA is consolidating this cost category item into a new cost category item entitled "Business Intelligence (BI) Modernization" and will continue to support WAWF modifications for industry and infrastructure backbone modernization efforts in support of all DCMA web capabilities.</p> <p>Business Intelligence (BI) Modernization DCMA is modernizing and replacing its ageing critical contracting applications with a Business Intelligence enterprise solution which enables end users to analyze multidimensional data interactively from multiple perspectives and data sources both internal and external to DCMA allowing for complex analytical and ad hoc queries with a rapid execution time. This modernization effort would replace critical applications such as Modifications & Delivery Orders (MDO), Contractor Business Analysis Repository (CBAR) , Messaging & Collaboration Services (MCC), Contract Receipt, Review, and Routing System (CRR), Contract Management Property Administration System (CPAS), Enterprise Integrated BI Toolset (EITS) and other applications. The solution will provide end user self-service customization allowing for the creation and modification of canned and unique dashboards, displays, workspaces, and reporting. Other considerations include online analytical processing (OLAP) which is a broader category of business intelligence which can be used for report writing.</p> <p>FY 2019 Plans: MOCAS In FY 2019 the MOCAS JPMO's focus will transition from modernizing business processes to implementing the modernized conceptual design architectures established in FY 2018. The JPMO anticipates the legacy MOCAS architecture transition will commence through prototyping and analysis of detailed designs of early development focused on three key enterprise service segments; Data Migration and Stabilization, Enhanced Reporting and User Workflow Automation. Additionally, in parallel, the MOCAS JPMO working through the DoD-wide enterprise governance model will continue to study, select, design, develop,</p>			
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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Management Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>test, and implement critical System Change Requests (SCRs) to further yield efficiency within the DoD's Procure to Pay (P2P) Business Process.</p> <p>IWMS IWMS will complete development and deployment of contract close-out and subsequently integrate with The Defense Contract Audit Agency (DCAA) and DCMA's Contract Business Analysis Repository to provide a "one stop shop" for DOD contract integration and close-out capabilities.</p> <p>TMS In FY 2019, TMS will plan, develop, test, and deploy Increment 3A to DCMA workforce and begin development of Increment 3B. Increment 3A will be deployed 2nd QTR FY 2019 and will focus on needed production updates, budgeting, and training certification capabilities. Increment 3B will focus on competency assessment, career development maps, Individual Development Plan (eIDP) management, On the Job Training (OJT) management, fulfillment checklist, certification management, and remaining items needed in the Tag library. Increment 3B is scheduled to be deploy 4th QTR FY 2019. In FY 2019, continued support to TMS Training requirements are imperative to the support and growth of DCMA's employees supporting the DCMA's acquisition oversight mission.</p> <p>EVAS Due to Cyber Enclave separation security requirements EVAS was required to pushed Phase II to the 4th quarter of FY 2019. EVAS plans to begin the second phase of the EVAS solution specifically the build out of the network infrastructure necessary to support the centralization of EV software and all supplier provided EV cost & schedule data. Centralization is necessary in order to deploy the EV Common Operation Picture allowing for automated real-time visibility across all EV programs, suppliers, and contracts.</p> <p>Business Intelligence (BI) Modernization BI Modernization will continue to provide internal DCMA end users self-service customization allowing for the creation and modification of canned and unique dashboards, displays, workspaces, and reporting across a multitude of DCMA functional capabilities. This cost category also includes online analytical processing (OLAP) which is a broader category of business intelligence which can be used for report writing.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease related to MOCAS and IWMS movement from requirement and development phases to testing and development refinement for initial capability deployment coupled with inflation adjustment.</p>				
Accomplishments/Planned Programs Subtotals		11.505	12.322	11.988

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Contract Management Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>			<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• 0701113BL: <i>PDW: Procurement Operations*</i>	2.439	4.297	3.823	-	3.823	2.866	2.895	2.924	2.983	Continuing	Continuing
• 0708550BL: <i>Operations & Maintenance</i>	-	-	138.319	-	138.319	123.575	131.065	123.564	123.599	Continuing	Continuing
• 0701113B:: <i>Operations & Maintenance</i>	129.499	168.639	7.945	0.000	7.945	20.464	17.414	28.336	31.438	Continuing	Continuing

Remarks

* Procurement amounts do not include Passenger Carrying Vehicle only includes IT related procurement

**Only O&M IT specific direct funding reflected above, reimbursable not included

D. Acquisition Strategy

The DCMA is invigorating efforts to adjust to the changing environment through achieving and sustaining audit readiness, creating an agile and flexible learning organization/culture to support future customer programs, initiating and strengthening acquisition processes and optimizing mission execution to support the acquisition enterprise through agile business practices. In pursuing these business practices, we are continuing to utilize both government full time equivalents and contractors to perform specialized functions such as software development, testing, and process automation.

E. Performance Metrics

To deliver on our mission and vision, the Agency is focused on four primary goals: 1) inform and contribute to cost control and affordability decisions; 2) develop agile business practices which optimize mission execution and support to the acquisition enterprise; 3) create and maintain an agile learning organization and culture that strives to exceed customer expectations; and 4) expect of ourselves what we expect of our contractors: good fiscal stewardship. All four of the strategic goals go directly to the heart of the DCMA mission. The Agency helps our partners spend their finite dollars wisely, ultimately ensuring the front line Warfighters get the equipment and services they need when they need them. Adherence to executing and ultimately attaining these goals will posture DCMA to positively support current and future Better Buying Power initiatives and initiatives in Services acquisition, innovative science and technology, and efforts to ensure greater acquisition affordability, and better cost control throughout the acquisition life cycle. Agency focus will not solely rest on qualitative contract administration functions, but will also focus on quantitative factors as well – those factors that will clearly emphasize the Agency’s return on investment (ROI) to the Department and to our other customers and the taxpayers at large. The Agency recognizes the obligation to be effective stewards of the funds we receive. In 2016, DCMA's return on investment to the Department and our other customers was \$2 for each \$1 invested by DoD. Additional ROI for the Department is the expanded and expanding DCMA commercial pricing expertise that will continue to improve DoD buying power, the Services' lethality, operational readiness, and sustainment posture.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Contract Management Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MOCAS	C/IDIQ	Various : Various	2.092	4.494	Apr 2017	5.081	Apr 2018	4.667	Apr 2019	-		4.667	Continuing	Continuing	Continuing
IWMS	Option/IDIQ	Various : Various	3.263	0.500	Oct 2017	4.163	Oct 2018	1.857	Oct 2019	-		1.857	Continuing	Continuing	Continuing
TMS	Option/IDIQ	Various : Various	3.602	0.999	Oct 2017	0.820	Oct 2018	1.291	Oct 2019	-		1.291	Continuing	Continuing	Continuing
EVAS	Option/IDIQ	Various : Various	1.317	0.999	Apr 2017	-		1.934	Apr 2019	-		1.934	Continuing	Continuing	Continuing
Asset and Service Mgmt	C/BPA	Various : Various	0.306	0.999	Apr 2017	-		-		-		-	-	-	-
Supply Chain Risk Assessment	Option/IDIQ	Various : Various	1.326	0.500	Nov 2016	-		-		-		-	-	-	-
Modification and Delivery Orders	C/IDIQ	Various : Various	0.714	0.799	Nov 2016	-		-		-		-	-	-	-
Other Programs	Option/IDIQ	Various : Various	145.723	2.215	Nov 2016	-		-		-		-	-	-	-
Business Intelligence Modernization	C/Various	Various : Various	-	-		2.258	Oct 2018	2.239	Apr 2019	-		2.239	Continuing	Continuing	Continuing
Subtotal			158.343	11.505		12.322		11.988		-		11.988	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	158.343	11.505	12.322	11.988	-	11.988	Continuing	Continuing	N/A

Remarks
 The DCMA Information Technology supports the Agency's CAS mission by capitalizing on IT investment innovations that leverage technology to achieve an agile enterprise architecture that improves its contract management workforce's productivity, efficiency, and effectiveness.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Contract Management Agency			Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>	

FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

MOCAS	
Requirement	
Development	
Testing	
Deployment	
IWMS	
Requirement	
Development	
Testing	
Deployment	
TMS	
Development	
Testing	
Deployment	
EVAS	
Testing	
Deployment	
Business Intelligence Modernization	
Requirement and Development	

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

MOCAS	
Requirement	

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Contract Management Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development																												
Testing																												
Deployment																												
<i>IWMS</i>																												
Requirement																												
Development																												
Testing																												
Deployment																												
<i>TMS</i>																												
Development																												
Testing																												
Deployment																												
<i>EVAS</i>																												
Testing																												
Deployment																												
<i>Business Intelligence Modernization</i>																												
Requirement and Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Contract Management Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MOCAS				
Requirement	2	2016	4	2023
Development	2	2017	4	2023
Testing	3	2017	4	2023
Deployment	4	2018	4	2023
IWMS				
Requirement	1	2016	4	2019
Development	1	2016	2	2021
Testing	2	2016	2	2022
Deployment	2	2017	3	2022
TMS				
Development	1	2016	4	2020
Testing	1	2016	1	2021
Deployment	2	2016	2	2022
EVAS				
Testing	3	2016	1	2019
Deployment	1	2017	1	2019
Business Intelligence Modernization				
Requirement and Development	1	2016	4	2023

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



DoD Human Resources Activity

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	16,888	35,249	35,249		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2018		FY 2018	FY 2018	
	FY 2018	Less Enacted	Total	Less Enacted	FY 2018
-----	Emergency	Div B	PB Requests*	DIV B	Remaining Req
	Requests**	P.L.115-96***	with CR Adj	P.L.115-96***	with CR Adj
	Emergency	MDDE + Ship	Base + OCO +	MDDE + Ship	Base + OCO +
		Repairs	Emergency**	Repairs	Emergency
-----	-----	-----	-----	-----	-----
Research, Development, Test & Eval, DW			35,249		35,249
Total Research, Development, Test & Evaluation			35,249		35,249

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Research, Development, Test & Eval, DW	25,210		25,210
Total Research, Development, Test & Evaluation	25,210		25,210

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
System Development And Demonstration	1,658	4,893	4,893		
Management Support	15,230	30,356	30,356		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	16,888	35,249	35,249		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
System Development And Demonstration			4,893		4,893
Management Support			30,356		30,356
Total Research, Development, Test & Evaluation			35,249		35,249
<u>Summary Recap of FYDP Programs</u>					
Research and Development			35,249		35,249
Total Research, Development, Test & Evaluation			35,249		35,249

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	296		296
Management Support	24,914		24,914
Total Research, Development, Test & Evaluation	25,210		25,210
 Summary Recap of FYDP Programs -----			
Research and Development	25,210		25,210
Total Research, Development, Test & Evaluation	25,210		25,210

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FY 2019 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
System Development And Demonstration	1,658	4,893	4,893		
Management Support	15,230	30,356	30,356		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	16,888	35,249	35,249		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		

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FY 2019 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
System Development And Demonstration			4,893		4,893
Management Support			30,356		30,356
Total Research, Development, Test & Evaluation			35,249		35,249
<u>Summary Recap of FYDP Programs</u>					
Research and Development			35,249		35,249
Total Research, Development, Test & Evaluation			35,249		35,249

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Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	296		296
Management Support	24,914		24,914
Total Research, Development, Test & Evaluation	25,210		25,210
 Summary Recap of FYDP Programs -----			
Research and Development	25,210		25,210
Total Research, Development, Test & Evaluation	25,210		25,210

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Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Defense Human Resources Activity	16,888	35,249	35,249		
Total Research, Development, Test & Evaluation	16,888	35,249	35,249		

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 (Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2018		FY 2018		FY 2018	
	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Defense Human Resources Activity				35,249		35,249
Total Research, Development, Test & Evaluation				35,249		35,249

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Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Defense Human Resources Activity	25,210		25,210
Total Research, Development, Test & Evaluation	25,210		25,210

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 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
124	0605021SE	Homeland Personnel Security Initiative	05	1,658	4,893	4,893			U
		System Development And Demonstration		1,658	4,893	4,893			
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	15,230	30,356	30,356			U
		Management Support		15,230	30,356	30,356			
Total Research, Development, Test & Eval, DW				16,888	35,249	35,249			

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Defense-Wide
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 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	Remaining Req	S
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		
124	0605021SE	Homeland Personnel Security Initiative	05				4,893		4,893	U
		System Development And Demonstration					4,893		4,893	
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06				30,356		30,356	U
		Management Support					30,356		30,356	
Total Research, Development, Test & Eval, DW							35,249		35,249	

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Defense-Wide
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Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
124	0605021SE	Homeland Personnel Security Initiative	05	296		296	U
		System Development And Demonstration		296		296	
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	24,914		24,914	U
		Management Support		24,914		24,914	
Total Research, Development, Test & Eval, DW				25,210		25,210	

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Defense Human Resources Activity
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 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
124	0605021SE	Homeland Personnel Security Initiative	05	1,658	4,893	4,893			U
		System Development And Demonstration		1,658	4,893	4,893			
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	15,230	30,356	30,356			U
		Management Support		15,230	30,356	30,356			
Total Defense Human Resources Activity				16,888	35,249	35,249			

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Defense Human Resources Activity
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 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	Remaining Req with CR Adj Base + OCO + Emergency	S e c
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		
124	0605021SE	Homeland Personnel Security Initiative	05				4,893		4,893	U
		System Development And Demonstration					4,893		4,893	
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06				30,356		30,356	U
		Management Support					30,356		30,356	
Total Defense Human Resources Activity							35,249		35,249	

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Defense Human Resources Activity
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 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
124	0605021SE	Homeland Personnel Security Initiative	05	296		296	U
		System Development And Demonstration		296		296	
162	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	24,914		24,914	U
		Management Support		24,914		24,914	
Total Defense Human Resources Activity				25,210		25,210	

R-119PB: FY 2019 President's Budget (Published Version), as of January 25, 2018 at 12:48:29

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DoD Human Resources Activity • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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DoD Human Resources Activity • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.286	1.658	4.893	0.296	-	0.296	0.295	0.295	0.301	0.307	Continuing	Continuing
01: <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>	0.286	1.658	4.893	0.296	-	0.296	0.295	0.295	0.301	0.307	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). RDTE funding in FY18 was applied to the start-up costs for expanding the recruiting database provided to all Military Services for use with officer and enlisted recruiting and to explore the merits of expanding use to civilian recruiting as proposed in a Force of the Future initiative. Specifically, the funds would provide contractor support for the development of a pilot expanded database, procurement of additional directory lists, and the purchase of IT hardware and software for the development of a user-friendly interface for accessing the data. FY19 RDTE funds in HSPD-12 will be applied to research and investigation of multifactor authentication alternatives that may allow DoD to supplement current public key infrastructure and DoD Self-Service Logon authentication solutions.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	1.658	4.893	0.296	-	0.296
Current President's Budget	1.658	4.893	0.296	-	0.296
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Recruiting Databases: OPA JAMRS will continue to operate and maintain the expanded JAMRSdb in FY19 and beyond using O&M, DW funding.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity										Date: February 2018		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>				Project (Number/Name) 01 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>	0.286	1.658	4.893	0.296	-	0.296	0.295	0.295	0.301	0.307	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Homeland Security Presidential Directive (HSPD-12) Initiative: The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). HSPD-12 requires rapid electronic authentication for all Government employees, uniformed individuals and contractors. Real Time Automated Personnel Identification System (RAPIDS) is the infrastructure that supports the Uniformed Services identification card, provides on-line updates to DEERS and issues the CAC to Service members, civilian employees, and eligible contractors, thus providing an enterprise-wide credential for both physical and logical access to DoD facilities and networks. CAC uses the DEERS database for authentication and personnel information.

Recruiting Databases Project: FY 2018 funds were directed to completing the expansion of recruiting database from the pilot started in FY 2017. It will be provided to all Military Services for use with officer and enlisted recruiting and to explore the merits of expanding use to civilian recruiting. Specifically, the funds will provide contractor support to research efforts on expanding the JAMRS Recruiting database for more precise direct messaging and run micro-targeting pilots with third party data buys.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Enrollment Eligibility Reporting System/HSPD-12/Recruiting Databases	1.658	4.893	0.296
Description: The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). HSPD-12 requires rapid electronic authentication for all Government employees, uniformed individuals and contractors.			
The Office of People analytics (OPA) JAMRS Recruiting Database (JAMRSdb) - Recruiting database provided to all Military Services.			
FY 2018 Plans:			
HSPD-12: Funds in HSPD-12 were applied to the DoD NextGen USID to allow the Department to replace the existing Teslin ID cards that are highly susceptible to counterfeiting due to an outdated design and lack newer anti-counterfeiting technology. This project was deferred from FY 2017 to accommodate higher priority identity management task for probabilistic search. Completing			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>	Project (Number/Name) 01 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>the USID redesign utilizing the latest technical and printing techniques on a plastic substrate will significantly improve card quality and reduce fraud.</p> <p>Recruiting Databases: FY18 funds were directed to completing the expansion of recruiting database from the pilot started in FY17. It will be provided to all Military Services for use with officer and enlisted recruiting and to explore the merits of expanding use to civilian recruiting. Specifically, the funds will provide contractor support to research efforts on expanding the JAMRS Recruiting database for more precise direct messaging and run micro-targeting pilots with third party data buys.</p> <p>Recruiting Databases (\$4.500 million):</p> <ul style="list-style-type: none"> - Research efforts on expanding the JAMRS Recruiting Database for more precise direct messaging. - Run micro-targeting pilots with third party data buys. <p>FY 2019 Plans:</p> <p>HSPD-12: FY 2019 RDTE funds in HSPD-12 will be applied to research and investigation of multifactor authentication alternatives that may allow DoD to supplement current public key infrastructure and DoD Self-Service Logon authentication solutions.</p> <p>Recruiting Databases: OPA JAMRS will continue to operate and maintain the expanded JAMRSdb in FY 2019 and beyond using O&M, DW funding.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p> <p>HSPD-12: Decrease is due to completion of DoD NextGen USID redesign.</p> <p>Recruiting databases: Decrease of \$4.5M because enhanced Recruiting database will be maintained with a different appropriation.</p>			
Accomplishments/Planned Programs Subtotals	1.658	4.893	0.296

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

HSPD-12: Existing contract vehicles in place/General Services Administration for Commercial Off The Shelf (COTS).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>	Project (Number/Name) 01 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>

E. Performance Metrics

None

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 DoD Human Resources Activity											Date: February 2018				
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0605021SE / Homeland Personnel Security Initiative				Project (Number/Name) 01 / Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases							

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Homeland Personnel Security Directive (HSPD-12) Initiative/ Recruiting Databases	C/IDIQ	Gulf Coast Enterprise : Pensacola, FL	0.286	1.658	Dec 2016	4.893	Dec 2017	0.296	Dec 2018	-		0.296	Continuing	Continuing	-
Subtotal			0.286	1.658		4.893		0.296		-		0.296	Continuing	Continuing	N/A

Remarks

HSPD-12: RDTE funds in HSPD-12 will extend through the FYDP and be applied to research and investigation of multifactor authentication alternatives that may allow DoD to supplement current public key infrastructure and DoD Self-Service Logon authentication solutions.

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.286	1.658	4.893	0.296	-	0.296	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>	Project (Number/Name) 01 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Homeland Security Presidential Directive (HSPD-12)

Recruiting Databases



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Personnel Security Initiative</i>	Project (Number/Name) 01 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative/Recruiting Databases</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Homeland Security Presidential Directive (HSPD-12)</i>				
Recruiting Databases	1	2018	4	2018

Note

HSPD-12: FY19 RDTE funds in HSPD-12 will be applied to research and investigation of multifactor authentication alternatives that may allow DoD to supplement current public key infrastructure and DoD Self-Service Logon authentication solutions.

Recruiting Databases: OPA JAMRS will continue to operate and maintain the expanded JAMRSdb in FY 2019 and beyond using O&M, DW funding.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	4.070	15.230	30.356	24.914	-	24.914	34.448	35.260	26.918	17.341	Continuing	Continuing
01: Defense Civilian Personnel Data System	-	0.000	5.600	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
5: ESGR Awards and Activity Tracking & Reporting (AATR) Tool	0.500	0.000	0.900	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
6: Enterprise Data Services	0.000	0.000	0.134	4.856	-	4.856	14.125	17.928	10.544	0.637	Continuing	Continuing
7: DSAID	0.000	1.932	4.916	1.800	-	1.800	2.232	0.000	0.000	0.000	-	-
8: CAP	0.000	0.000	1.780	1.292	-	1.292	0.000	0.000	0.000	0.000	-	-
9: Office of People Analytics (OPA), Testing and Assessment	0.000	2.686	3.640	2.419	-	2.419	4.644	4.448	4.207	4.291	Continuing	Continuing
10: Enterprise Human Resource Infor System(EHRIS)	3.570	4.585	2.493	3.127	-	3.127	4.932	4.728	4.471	4.562	Continuing	Continuing
11: Personnel Accountability (PA)	0.000	1.774	1.742	3.330	-	3.330	2.448	2.345	2.217	2.262	Continuing	Continuing
12: Personnel Security Assurance (PSA)	0.000	4.253	4.351	4.116	-	4.116	5.174	4.956	4.686	4.780	Continuing	Continuing
13: Federal Voting Assistance Program	0.000	0.000	0.800	0.793	-	0.793	0.893	0.855	0.793	0.809	Continuing	Continuing
14: Defense Travel System-Modernization (PILOT)	-	0.000	4.000	3.181	-	3.181	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

A. Mission Description and Budget Item Justification

The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). This PE includes application of R&D to expedite prototype development and mission support efforts to sustain and/or modernize operations required for general RDT&E.

For FY 2017, as a result of a Business Process and Systems Review, DHRA implemented a major reorganization that impacted the DHRA RDT&E budget. The most significant aspect of this reorganization, from a RDT&E perspective, was the integration of the Enterprise Human Resources Information System (EHRIS) into the

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity Date: February 2018

Appropriation/Budget Activity R-1 Program Element (Number/Name)
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 6: PE 0605803SE I R&D in Support of DOD Enlistment, Testing and Evaluation
RDT&E Management Support

Defense Manpower Data Center's (DMDC) portfolio of information technology (IT) initiatives. Additionally, DHRA has implemented a major reorganization of the DMDC programs to more accurately align budget program lines with the DHRA Information Technology (IT) data reported in the DHRA IT Budget. The Defense Eligibility and Enrollment System (DEERS); Data Governance; Real Time Automated Personnel Identification System (RAPIDS); Common Access Card (CAC); the Cyber Security program has been integrated into the DEERS and RAPIDS programs, with CAC being retained as part of the RAPIDS program. Synchronized Pre-deployment and Operational Tracker (SPOT) has been integrated into a Personnel Accountability (PA) program, that also includes Joint Personnel Accountability Reconciliation and Reporting (JPARR), and the Noncombatant Evacuation Operations (NEO) Tracking System (NTS).

Project 1: DCPDS - this project is described below in Project #10 EHRIS where it has been realigned.

Project 5: ESGR Awards & Activity Tracking (AATR) Tool. Employer Support of the Guard and Reserve (ESGR) requires a comprehensive web-based application (Awards and Activity Tracking and Reporting) to track ESGR Activities to include briefings and recognition of civilian employers and briefings of National Guard and Reserve that will track against organizational goals vs. costs and the hours donated by Volunteers. The application will replace several manual processes that use Microsoft Excel spreadsheets across 54 State Committees and through contractor support. This will also place all critical data in a DoD Data Center. Development of a web-based application would immensely improve data collection and analysis while allowing field staff and volunteers to better focus on operations and mission accomplishment. The application would be an addition to ESGR's current Portal that contains ESGR's member management, inquiry and case management, and freedom award nomination systems.

Project 6: Enterprise Data Management (EDS) is addressing two critical projects in FY 2019: 1) JOM and 2) EDDIE. 1) The Joint Officer Management (JOM) modernization initiative will support improvements in the Joint Manpower Information System's (JMIS) automation, reliability, accuracy, and system interoperability to enable the Department to more effectively comply with Title 10 management requirements of Joint Duty Officers in the Active and Reserve forces, and improve the sight picture of joint officer personnel capabilities and readiness for the SECDEF and the Chairman, Joint Chiefs of Staff (CJCS). The JMIS is the DoD's sole IT system to inform the SECDEF and CJCS on their operational joint personnel officer readiness capability. The system is used to track joint duty billets, and the officers assigned to them. It also tracks joint duty experiences, education, training, and qualifications for facilitation of joint duty officer assignments and promotions. The legacy system was built in the 1990's and is no longer agile enough to support today's mission. This modernization project will bring JOM into the 21st century while addressing critical compliance issue around cyber security, and legislative and policy changes for which the legacy system has been unable to keep pace. 2) The Enterprise Data to Decisions Information Environment (EDDIE) introduces a streamlined way to provide person based "data as a service" and "analytics as a service" to all of DoD and other Federal Agencies. It enables and improves all types of analytics from standard reporting to more emergent and embedded predictive/prescriptive analytics. EDDIE will assist decision makers in forming relevant questions, retrieving pertinent information, and informing policy and program changes. In FY 2019, the Office of People Analytics (OPA) and Defense Manpower Data Center (DMDC) will collaborate with the Federally Funded Research and Development Centers (FFRDCs), Policy Offices, and other stakeholders to perform business process reengineering to improve the approval processes to gain access to the data, define workflow, and to define the minimal and optimal data universe required for the collaborative environment. FY 2019 will perform the architecture, design, and Analysis of Alternatives for the environment including at a minimum evaluation of the DISA Data Lake, CIO Data Environment, and PDE Enhancement.

Project 7: Defense Sexual Assault Incidents Database. The Defense Sexual Assault Incidents Database (DSAID) is the integrated DoD SAPR Data Collection and Reporting System that accommodates a variety of uses, including the tracking of sexual assault victim support services, support Sexual Assault Prevention and

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>
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Response (SAPR) program administration, program reporting requirements, and data analysis. In order to facilitate analysis at the OSD level, the System will be able to easily export data for analysis in computerized statistical applications, such as Statistical Package for the Social Sciences (SPSS). Service field-level users use the system to track support to victims of sexual assault throughout the lifecycle of that support requirement and to facilitate sexual assault case transfer between the Sexual Assault Response Coordinators (SARCs) and Services. Service headquarters-level users use the system to support program planning, analysis, and management. DoD SAPR Office (SAPRO) users and Service headquarters-level users access the system to produce mandated and requested reports, monitor program effectiveness and support cohort and trend analysis.

Project 8: Computer/Electronic Accommodations Program. The Computer/Electronic Accommodations Program (CAP) mission is to provide assistive technology and accommodations to support individuals with disabilities and wounded, ill, and injured Service members throughout the Federal Government in accessing information and communication technology. CAP currently has partnerships with 69 federal agencies. CAP’s wounded, ill, and injured Service member’s initiative is designed to cover active duty Service members, to include Guard or Reserve who are on active duty orders, including Title 10 orders. Since its inception, the program has provided over 150,000 accommodations for Department of Defense (DoD) and non-DoD employees with disabilities and wounded, ill, and injured Service members.

Currently CAP utilizes a Government-Off-The-Shelf (GOTS) product designed to support the program’s robust mission. This product, CAP Portal, is used primarily to process DoD and other government agencies requests for hardware, software, training, and other miscellaneous accommodation services. CAP Portal also processes information pertaining to developing and tracking requirements packages, market research, events and outreach to include proposals, presentations, materials, and assistive technology. The CAP Portal allows staff and contract support personnel to utilize all aspects of its functionality to facilitate the provision of reasonable accommodations, and run various reports to make financial forecasts with the data that is contained within the system.

Project 9: OPA Testing and Assessment Division administers testing programs, which enable the Armed Services to select highly qualified military recruits. The DoD uses a single test, the Armed Services Vocational Aptitude Battery (ASVAB), to determine eligibility of military applicants and to report recruit quality data to Congress. High quality recruits are obtained from administering the ASVAB annually to approximately 600,000 applicants for Military Service as part of the DoD Enlistment Testing program, and to 1 million students in the DoD Student Testing program. Each Service also uses ASVAB test forms developed in this program as part of their in-service testing programs. New ASVAB test forms and related support materials are implemented approximately every four years. This allows DoD to make measurement improvements as well as decrease the likelihood of test compromise. Ongoing RDT&E efforts include development and evaluation of procedures which (1) reduce or eliminate threats to the validity of the ASVAB test scores generated; (2) improve the efficiency of the test development, calibration, and validation process; and (3) improve selection and classification decisions made by each Service through more effective use of test score information. In addition, periodic assessments are required to provide DoD manpower planners and Congress with information on aptitude trends in the population from which recruits are drawn.

Project 10: The Enterprise Human Resource Information System (EHRIS) is comprised of the Defense Civilian Personnel Data System (DCPDS), Civilian HR IT Managed Services, Civilian HR IT Enterprise Services, and Civilian HR IT Program Planning and Management.
- DCPDS is the DoD enterprise civilian personnel HR system, servicing approximately 800,000 users worldwide. The system holds all authoritative civilian employee “personal data” and personnel actions, and provides HR business capabilities to support the end-to-end HR line of business and employee self-service capabilities, such as benefits election. The DCPDS program implements systems training, testing, and requirements management that provides user and administrator training for DCPDS and performs integrated testing for DCPDS and DoD HR IT systems to ensure proper operations throughout their life cycles.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>
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-Civilian HR IT Managed Services is responsible to customers for deployment and management of civilian HR IT systems delivered to the DoD by external government service providers, such as the Office of Personnel Management (OPM). Services currently managed include staff acquisition (USA Jobs and USA Staffing) and the electronic official personnel folders (eOPF). DMDC's role is to centrally manage the Department's requirements for these services so that the service provider (in most cases OPM) is working with a single point of contact at DoD.

-Civilian HR IT Enterprise Services is responsible to customers for the development, operations, and sustainment of all other enterprise civilian HR IT capabilities not provided by DCPDS or external government service providers. These systems are typically unique to the DoD and allow the DoD to automate the remainder of the end-to-end HR line of business.

-Civilian HR IT Program Planning and Management centralizes civilian HR IT planning and strategy activities within DMDC in order to create an integrated plan for the future that both aligns with higher level guidance and takes into account requirements and priorities across the Department for automation of civilian HR IT processes. This program works with functional sponsors and users to produce validated functional requirements, as well as technical requirements that apply to all DoD HR IT systems.

Project 11: Personnel Accountability program is comprised of several systems, including: Synchronized Pre-deployment Operational Tracker Enterprise Suite (SPOT-ES), Joint Personnel Accountability Reconciliation and Reporting (JPARR), Defense Travel System (DTS)/Defense Travel System Modernization and Noncombatant Evacuation Operations (NEO) Tracking System (NTS). This family of systems represents end-to-end tracking, reconciliation and reporting of DoD personnel location and movements, to include military, DoD affiliated civilian, contractor and U.S. citizens. This includes DoD travel, contracts, and contractor personnel tracking in support of contingencies, military readiness, reporting of locations at the unit and person level, accountability of DoD personnel during (and after) natural or man-made disasters and accountability and visibility of noncombatant evacuees.

Project 12: Personnel Security Assurance (PSA) provides comprehensive capabilities to perform processing and verification of security clearances for all DoD military personnel, civilians and contractors including the technology and processes that need to be addressed in order to implement Continuous Evaluation. Funding in this program support the Defense Information System for Security (DISS) which transferred to DHRA/DMDC from DLA in FY 2017. The DISS mission is to consolidate the DoD personnel security mission into an enterprise adjudicative case management system that will automate the implementation of improved national investigative and adjudicative standards to eliminate costly and inefficient work processes and increase information collaboration across the community.

Project 13: The Federal Voting Assistance Program (FVAP) administers many of the federal responsibilities of the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986 and other federal military voter registration and assistance laws. FVAP works to ensure Service members, their eligible family members and overseas citizens are aware of their right to vote and have the tools and resources to successfully do so – from anywhere in the world. FVAP works to Increase the likelihood of interested Active Duty Members to use available FVAP resources to increase their level of awareness of available DoD voting assistance resources, which will increase the likelihood of returning their absentee ballot. FVAP conducts voting research projects with States, local election jurisdictions and private entities to assist UOCAVA voters to register to vote and submit their absentee ballot and improve federal, State and local election processes and procedures.

Project 14: Defense Travel System-Modernization (Pilot) - The DoD Travel System Pilot Program (DTSP), is part of the DTS-M effort, to determine the viability of using commercial-off-the-shelf software as a service (CSaaS) to conduct DoD travel.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	22.240	30.356	21.326	-	21.326
Current President's Budget	15.230	30.356	24.914	-	24.914
Total Adjustments	-7.010	0.000	3.588	-	3.588
• Congressional General Reductions	-0.010	-			
• Congressional Directed Reductions	-7.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other: FY 2019 Program Increases	-	-	10.283	-	10.283
• Other: Underexecution/Inflation adjustments	-	-	-6.695	-	-6.695

Change Summary Explanation

Congress reduced DHRA by -\$7.010 million in FY 2017 for FFRDC reduction (-\$0.01M) and unjustified growth (-\$7.0 million).

FY 2019 Program increases to: EDS for EDDIE (\$4.500 million), EDS for JOMS (\$0.283 million), SAPRO for DSAID (\$3.500 million), and PA for the New Travel System (\$2.000 million)

The FY 2019 funding request was reduced by \$6.430 million to account for the availability of prior year execution balances, and adjusted for inflation rate changes by -\$0.265 million.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 01 / Defense Civilian Personnel Data System
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: Defense Civilian Personnel Data System	-	0.000	5.600	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DCPDS is the DoD enterprise civilian personnel HR system, servicing approximately 800,000 users worldwide. The system holds all authoritative civilian employee "personal data" and personnel actions, and provides HR business capabilities to support the end-to-end HR line of business and employee self-service capabilities, such as benefits election. The DCPDS program implements systems training, testing, and requirements management that provides user and administrator training for DCPDS and performs integrated testing for DCPDS and DoD HR IT systems to ensure proper operations throughout their life cycles.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Database Consolidation	0.000	5.600	0.000
FY 2018 Plans: Continue completion efforts on consolidation to a single database.			
FY 2019 Plans: N/A			
FY 2018 to FY 2019 Increase/Decrease Statement: The decrease is attributable to completion of the database consolidation effort in FY 2018.			
Accomplishments/Planned Programs Subtotals	0.000	5.600	0.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 5 / ESGR Awards and Activity Tracking & Reporting (AATR) Tool
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
5: ESGR Awards and Activity Tracking & Reporting (AATR) Tool	0.500	0.000	0.900	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Redesign the ESGR Portal that contains the Inquiry and Case Management System, Member Management System, and Secretary of Defense Employer Support Freedom Award Nomination (FAN) system to account for technology changes and migrate to an approved DoD or Federal Cloud environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: ESGR Redesign/Technical Refresh	0.000	0.900	-
FY 2018 Plans: • ESGR Portal Redesign/Technical Refresh			
FY 2018 to FY 2019 Increase/Decrease Statement: ESGR was a one-time RDT&E effort in FY 2018.			
Accomplishments/Planned Programs Subtotals	0.000	0.900	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 6 / Enterprise Data Services
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
6: Enterprise Data Services	0.000	0.000	0.134	4.856	-	4.856	14.125	17.928	10.544	0.637	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Cybersecurity deals with the unauthorized exposure of classified data to sites such as WikiLeaks which raised awareness on the need for improved data security management and access control measures across DoD IT enterprise. Cross Domain Information Sharing (CDS) provides for protected, automated transfer of data across networks of different security classifications reducing the need for removable media while better safe guarding the transport of information from one network to another. DMDC is developing the Enterprise Identity Attribute Service (EIAS)/Access Based Access Control technology in the classified environment as an immediate deterrent to allow/deny access to classified information giving the DoD the ability to control and monitor pre-provisioned user access in a manner that cannot be repudiated (e.g., using CAC-enabled PKE Authentication). Further, DOD will have the ability to enable, monitor and control the authorized transfer of information between SIPRNET and other DOD Networks as required via globally available and operationally effective cross domain enterprise service solutions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Enterprise Data Services (EDS)	0.000	0.134	4.856
FY 2018 Plans:			
<ul style="list-style-type: none"> • Procure the Automated Regression and Functional Testing (EoSL) Modernization • Install Microsoft Forefront Identity Management (FIM) • Implement Network (EoSL) Lifecycle Modernization • Modernize the VTC/AV Upgrades for DoDC (Seaside) and Mark Center (EoSL) Lifecycle Modernization • Server End of Service Life (EoSL) Lifecycle Modernization • Wireless Local Area Network (WLAN) (EoSL) Lifecycle Modernization • Destruction Of Mainframe Tapes • Implementation of Audit Log Management • Continued development and implementation of the Intrusion Detection System / Intrusion Prevention System (IDS/IPS) • Continued installation of required Port Aggregators • Implement Rogue System Detection (RSD) • Implement Dynamic Code Scanning Solution (NTO Spider) • Implement Static Code Scanning Solution (Fortify) 			
FY 2019 Plans:			
<ul style="list-style-type: none"> • Research JOM requirements and perform decomposition of the technical implementation requirements and specifications needed for the development efforts in FY20-FY23. • Develop JOM proposed architecture for modernized system. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 6 / Enterprise Data Services

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> Evaluate JOM interoperability requirements and system interfaces. Research existing alternatives and develop an Analysis of Alternatives for the EDDIE environment. Evaluate the DISA Data Lake, CIO Data Environment, and PDE Enhancement. Develop the architecture and design for EDDIE. Collaborate with the FFRDCs, Policy Offices, and other stakeholders on EDDIE. Perform business process reengineering in support of EDDIE to improve the approval processes in gaining access to the data. Define EDDIE workflow. Define the minimal and optimal data universe required for the EDDIE collaborative environment. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The EDS project increase from FY18 to FY19 supports both the JOM modernization project and the EDDIE project which both begin in FY 2019.</p>			
Accomplishments/Planned Programs Subtotals	0.000	0.134	4.856

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 7 / DSAID
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
7: DSAID	0.000	1.932	4.916	1.800	-	1.800	2.232	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Defense Sexual Assault Incidents Database (DSAID) is the integrated DoD SAPR Data Collection and Reporting System that accommodates a variety of uses, including the tracking of sexual assault victim support services, support SAPR program administration, program reporting requirements, and data analysis.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Sexual Assault Incidents Database (DSAID)	1.932	4.916	1.800
FY 2018 Plans:			
<ul style="list-style-type: none"> • 6 Server Upgrade • Develop Secure File Locker Mechanism • Incorporate DSAID Control Board (CCB) approved and pending Change Requests (CRs) (e.g. Sharing VAs across Services) • Add functionality to the Enhanced Reporting Capability • Implement or update interfaces with Service Legal Agency Systems, personnel systems, and external databases (DMDC/ DEERS) 			
FY 2019 Plans:			
<ul style="list-style-type: none"> • Add Business Intelligence tools to the Enhanced Reporting Capability Module • Incorporate DSAID Control Board (CCB) approved and pending Change Requests (CRs) • Implement or update interfaces with the Service Investigative Agency • Incorporate DSAID CCB approved and pending change requests (e.g. Create additional LO Modules for Regional, Academies, NGB, and Coast Guard) • Add Service interface (e.g. Navy RMS & USMC MID) to the Enhanced Reporting Capability Module 			
FY 2018 to FY 2019 Increase/Decrease Statement:			
Decrease in funding \$1.671M from FY 2018 to FY 2019 - realigning planned FY 2019 requirements to FY 2020 and prioritizing those requirements and associated funding:			
FY 2019 to FY 2020 - Implement or update interfaces with the Service Investigative Agencies.			
FY 2019 to FY 2020 - Add Service interface (e.g. Navy RMS & USMC MID) to the Enhanced Reporting Capability Module.			
Accomplishments/Planned Programs Subtotals	1.932	4.916	1.800

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) 7 / <i>DSAID</i>

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

- In accordance with contract Plan of Action & Milestones.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 8 / CAP
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
8: CAP	0.000	0.000	1.780	1.292	-	1.292	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Computer/Electronic Accommodations Program (CAP) Portal has been certified as a Defense Business System (DBS). This project will help CAP obtain and maintain an optimized and certified DBS that executes data collection, records management, and reporting accountability for all stakeholders. In order to enhance areas of program data-tracking capabilities and stabilize the environment for future operations, CAP requires modernization of CAP Portal. The CAP Portal has pages/controls that have accumulated up to 7,000 lines of code, making it difficult to ensure the reliability of any updates made to the system which has undergone over 500 change requests since its launch.

There are components and functionality that are no longer being utilized and others needed, but it is risky to remove or disable due to the interconnected nature of the codebase. The current codebase utilizes an outdated framework that is difficult to maintain. The CAP Modernization Project will implement a .NET Model View Controller (MVC) framework to separate the business, display and input layers of the code. As CAP's operating procedures evolve, CAP Portal's current structure will not match the changing business needs of its users. Towards that end, the issue of restructuring CAP Portal is necessary to ensure flexibility and reliability moving forward. As a result of an outdated framework, the current CAP Portal is becoming increasingly challenging to maintain and less reliable when making updates. The CAP Modernization Project will provide a restructured database for CAP Portal with an updated codebase to provide a solid foundation that supports CAP's current structure and business processes while also increasing flexibility for future enhancements and efficiencies. All aspects of CAP Portal will be enhanced by this project, which will provide a streamlined foundation on which to incorporate new internal processing workflow entitled ONE CAP. It will provide the ability to implement new processes that reflect the current organization, roles, responsibilities, tasks and specific workflow and assignments. The modernization of technology will ensure full integration of the new internal operating model.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: The Computer/Electronic Accommodations Program (CAP)	-	1.780	1.292
FY 2018 Plans: Enhancements in FY 2018 will include development efforts along several lines. One such effort will be increasing the ability for CAP Staff to update content on the CAP website, CAP Mobile App, and communications template to reduce dependence on external resources to make these changes. Also included are development efforts aimed at enhancing the ability of CAP Staff to document process actions within the system in support of procurement and acquisition records keeping requirements as well as to facilitate effective relationship management between CAP, the DoD, Federal partner agencies, and other stakeholders. Another major effort will be increasing the self-service accessibility of information to CAP customers to reduce the level of effort required to pass on information regarding their requests for reasonable accommodation.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 8 / CAP
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
FY 2019 is a continuation of the efforts accomplished in FY 2018.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Project continues in FY 2019.			
Accomplishments/Planned Programs Subtotals	-	1.780	1.292

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 9 / Office of People Analytics (OPA), Testing and Assessment
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
9: Office of People Analytics (OPA), Testing and Assessment	0.000	2.686	3.640	2.419	-	2.419	4.644	4.448	4.207	4.291	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The primary mission of OPA Testing and Assessment is to test and implement more accurate methods of assessing aptitudes required for military enlistment, success in training, and performance on the job. Also, it includes implementing methods that are useful in the identification of persons with the high aptitudes required by today's smaller and more technically demanding military.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Office of People Analytics (OPA), Testing and Assessment	2.686	3.640	2.419
FY 2018 Plans:			
<ul style="list-style-type: none"> • Develop automated item generation of General Science and Arithmetic Reasoning items • Research efforts on new measures/new content that could potentially be added to the ASVAB 			
FY 2019 Plans:			
<ul style="list-style-type: none"> • Improve the efficiency of the test development, calibration, and validation process • Continue research efforts on new measures/new content that could potentially be added to the ASVAB 			
FY 2018 to FY 2019 Increase/Decrease Statement:			
The decrease in funding between FY 2018 and FY 2019 will delay development and implementation of new tests with higher predictive validity for predicting success in training. Developments delayed in FY19 will be implemented in FY 2020.			
Accomplishments/Planned Programs Subtotals	2.686	3.640	2.419

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation					Project (Number/Name) 10 / Enterprise Human Resource Infor System(EHRIS)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
10: Enterprise Human Resource Infor System(EHRIS)	3.570	4.585	2.493	3.127	-	3.127	4.932	4.728	4.471	4.562	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The planned Civilian HR automation enhancements are focused on software development to rationalize and modernize legacy systems and standalone systems to support the Department’s civilian workforce, including a DoD-Wide performance management system; enhancement of employee competency assessment capability and talent management; modernization of the Priority Placement Program and Reemployment Priority List; and integration of succession planning. In addition, changes to the Defense Civilian Personnel Data System (DCPDS) are required for the Office of Personnel Management (OPM) mandates, HR Line of Business (LoB) directives, electronic Official Personnel Folder changes, and Retirement Systems Modernization implementation. DoD is one of five designated Shared Service Centers in the federal government focused on providing standard services across agency lines, potentially gaining significant business and cost-saving benefits. DoD is considered a leader in this initiative.

DCPDS is the Department’s enterprise civilian HR system that has proven a recurring \$200M annual cost-avoidance originally projected in the achievement of full operational capability in 2002 and which continues to operate as the DoD system serving over 800,000 employee records. Additional initiatives to sustain the Department’s lead in automated systems include expansion the Oracle eBusiness Suite (EBS) capability to provide self-service functionality, centralized payroll support, and data warehouse improvements. Compliance with a number of directives, such as Data Center Optimization Initiative (DCOI) and Financial Audit Readiness (FIAR), drive additional consolidation requirements.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Enterprise Human Resource Infor System (EHRIS)	4.585	2.493	3.127
FY 2018 Plans:			
<ul style="list-style-type: none"> • Continue to deliver improved Benefits processing and employee self service capabilities • Continue completion efforts on consolidation to single database • Continue work on integration of time and attendance and payroll processing 			
FY 2019 Plans:			
Deploy Modernized Priority Placement Program and Reemployment Priority List Solution <ul style="list-style-type: none"> • Enhance Competency Management and Talent Management • Pilot USA Performance for Executive Performance Management • Explore Succession Planning • Complete consolidation to single DCPDS database • Complete HRIT enterprise system hosting transition to DISA 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018		
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 10 / Enterprise Human Resource Infor System(EHRIS)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
• Begin strategy for integration of time and attendance & payroll processing				
FY 2018 to FY 2019 Increase/Decrease Statement: The increase supports the FY 2019 base plans.				
Accomplishments/Planned Programs Subtotals		4.585	2.493	3.127
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) 11 / Personnel Accountability (PA)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
11: <i>Personnel Accountability (PA)</i>	0.000	1.774	1.742	3.330	-	3.330	2.448	2.345	2.217	2.262	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The PA program is comprised of three sub-programs: Synchronized Pre-deployment and Operational Tracker (SPOT), Joint Personnel Accountability Reconciliation and Reporting (JPARR), and the Noncombatant Evacuation Operations (NEO) Tracking System (NTS). This family of systems represents end-to-end tracking, reconciliation and reporting of DoD personnel location and movements, to include military, DoD affiliated civilians, contractors, and U.S. citizens. This includes DoD contracts, and contractor personnel tracking in support of contingencies, military readiness, reporting of locations at the unit and person level, accountability of DoD personnel during (and after) natural or man-made disasters, and accountability and visibility of noncombatant evacuees. SPOT is the DoD system of record for accountability and visibility of contracts and contractor personnel authorized to operate in a contingency operation. JPARR is a "public" SIPR only application that provides daily person-level location reporting. JPARR receives feeds for Service and Agency deployment systems, reconciles the data, and provides various reports at unit level detail. NTS is a certified and accredited DoD automated system that accounts for, and sustains visibility of noncombatant evacuees during a NEO.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Personnel Accountability (PA)	1.774	1.742	3.330
FY 2018 Plans:			
<ul style="list-style-type: none"> • Modernize hardware and peripheral footprint • Automate and reduce maintenance requirements for fielded systems • Modernize data management and data processing • Modernize application technologies and processes • Develop application programming interfaces (API) and micro services • Research and develop mobile technologies • Identify, reduce and consolidate fragmented/duplicated personnel accountability systems 			
FY 2019 Plans:			
Enhancements will reduce the physical footprint of systems such as NEO and SPOT-ES (Joint Asset Movement Management System). In coordination with PACOM, DMDC will be creating the ability to pre-populate a NEO with the affected population to ensure faster more accurate accountability. Personnel Accountability will be looking at an effort to analyze and develop a plan to migrate SPOT-ES from the .NET framework to the Java technology stack standard supported by DMDC which will allow development and operations to live on DMDC shared application infrastructure.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 11 / Personnel Accountability (PA)
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Personnel Accountability will also work towards several new modernization efforts to include development and implementation of distributed processing, business intelligence and geographic information system (GIS) tools to support the Contingency Tracking System (CTS) and Joint Personnel Accountability Reconciliation and Reporting (JPARR) systems. Additionally we will research and create an integration plan for the possible use of Blue Force Tracking data and Radio-frequency identification (RFID) scanning technologies for evacuation and personnel accounting operations.			
FY 2018 to FY 2019 Increase/Decrease Statement: Increase is mainly attributable to a combination of price growth and normal schedule fluctuations associated with modernization.			
Accomplishments/Planned Programs Subtotals	1.774	1.742	3.330

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) 12 / Personnel Security Assurance (PSA)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
12: Personnel Security Assurance (PSA)	0.000	4.253	4.351	4.116	-	4.116	5.174	4.956	4.686	4.780	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Personnel Security Assurance (PSA) provides comprehensive capabilities to perform processing and verification of security clearances for all DoD military personnel, civilians and contractors including the technology and processes that need to be addressed in order to implement Continuous Evaluation. Funds within this program will support the Defense Information System for Security (DISS). The DISS mission is to consolidate the DoD personnel security mission into an enterprise adjudicative case management system that will automate the implementation of improved national investigative and adjudicative standards to eliminate costly and inefficient work processes and increase information collaboration across the community.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Personnel Security Assurance	4.253	4.351	4.116
FY 2018 Plans: • FY 2018 RDT&E will be used for DISS development to meet emerging interface or architecture requirements as well as data quality initiatives.			
FY 2019 Plans: FY 2019 RDT&E will be used for DISS development to meet National Security, Suitability and Credentialing reform initiatives.			
FY 2018 to FY 2019 Increase/Decrease Statement: The project continues in FY 2019.			
Accomplishments/Planned Programs Subtotals	4.253	4.351	4.116

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation					Project (Number/Name) 13 / Federal Voting Assistance Program		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
13: <i>Federal Voting Assistance Program</i>	0.000	0.000	0.800	0.793	-	0.793	0.893	0.855	0.793	0.809	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

FVAP administers many of the federal responsibilities of the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986 and other federal military voter registration and assistance laws. FVAP works to ensure Service members, their eligible family members and overseas citizens are aware of their right to vote and have the tools and resources to successfully do so – from anywhere in the world. FVAP works to increase the likelihood of interested Active Duty Members to use available FVAP resources to increase their level of awareness of available DoD voting assistance resources, which will increase the likelihood of returning their absentee ballot. FVAP conducts voting research projects with States, local election jurisdictions and private entities to assist UOCAVA voters to register to vote and submit their absentee ballot and improve federal, State and local election processes and procedures.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Federal Voting Assistance Program	-	0.800	0.793
Description: The Federal Voting Assistance Program (FVAP) requires a research and analysis policy clearinghouse program that continues to research and present the value of key policy and technology topics that connects to the successful return of absentee balloting materials from military and overseas citizen voters pursuant to the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA).			
FY 2018 Plans: FVAP requires a clearinghouse through a cooperative agreement with a nonprofit organization to work with FVAP to develop innovative programs to support uniformed overseas and civilian overseas voters.			
<ul style="list-style-type: none"> • Assess the impact of previous efforts to enact structured data feeds from the States and localities with the most populous number of military and overseas voters. • Identify and assess the process to assess voter residency and how it impacts overseas citizen voters attempting to vote in federal elections. • Study the extent to which States enact authorizations for the use and acceptance of electronic signatures derived from the Department of Defense Common Access Card (CAC), or its successor. • Identify the feasibility and risks associated with a comprehensive approach for States to establish a single statewide office with the technology and software to process UOCAVA absentee balloting materials. • Monitor the implementation, adoption and impact of clearinghouse recommendations and voting technology practices. 			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 13 / Federal Voting Assistance Program

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
FVAP efforts in FY 2019 are a continuation of the cooperative agreement from FY 2018.			
FY 2018 to FY 2019 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	-	0.800	0.793

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Each project contained within this program contains specific metrics to determine progress towards completion. Metrics for all include completed and documented analysis provided by the performer. The completion date for that analysis varies with each project. In addition, to that analysis, each effort contains a roadmap addressing the best use of the findings throughout the department. If the results of the analysis show benefit to the Department, those findings are included in policy, doctrine, tactics and procedures. The project will yield actionable findings on how to best assist UOCAVA voters while reducing the overall reporting burden for these States to provide data on the number of absentee ballots transmitted to and received from military and overseas citizens after each federal election. Process mappings about how the Federal Post Card Application and the Federal Write-in Absentee Ballot, are treated by States for uniformed overseas and civilian overseas citizens and the impact of their residency classifications will identify the extent of uniformed and civilian overseas citizens who vote. The acceptance of electronic signatures derived from the Common Access Card within the Department provides significant potential for ensuring the absentee balloting process is seamless for active duty military members by permitting the use of an electronic signing and submission of an absentee ballot application in those States that permit an electronic submission. This will measure the extent to which States have proceeded with the consideration and adoption of authorizing statutes or administrative rules to permit the use of electronic signatures in a limited fashion and for a limited population of uniformed overseas voters.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 DoD Human Resources Activity **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) 14 / Defense Travel System-Modernization (PILOT)
--	---	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
14: Defense Travel System-Modernization (PILOT)	-	0.000	4.000	3.181	-	3.181	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD Travel System Pilot Program (DTSP), is part of the DTS-M effort, to determine the viability of using commercial-off-the-shelf software as a service (CSaaS) to conduct DoD travel.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Travel System-Modernization	0.000	4.000	3.181
FY 2018 Plans: Defense Travel System (DTS). At the request of Acting Secretary of Defense, DHRA is conducting a DoD Travel System Pilot Program (DTSP), as part of the DTS-M effort, to determine the viability of using commercial-off-the-shelf software as a service (CSaaS) to conduct DoD travel.			
FY 2019 Plans: DTS supports \$3.0 Billion in annual travel across the DoD. DTSP will investigate the use of CSaaS to conduct DoD Travel under the Federal and Joint Travel Regulations.			
FY 2018 to FY 2019 Increase/Decrease Statement: The Defense Travel System-Modernization project will reside within the Personnel Accountability (PA) program.			
Accomplishments/Planned Programs Subtotals	0.000	4.000	3.181

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



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Department of Defense
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	256,390	256,494	256,494		
Total Research, Development, Test & Evaluation	256,390	256,494	256,494		

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Department of Defense
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Research, Development, Test & Eval, DW				256,494	256,494
Total Research, Development, Test & Evaluation				256,494	256,494

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

26 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	268,740		268,740
Total Research, Development, Test & Evaluation	268,740		268,740

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

26 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities -----					
System Development And Demonstration	7,600	2,576	2,576		
Management Support	12,200	22,111	22,111		
Operational System Development	236,590	231,807	231,807		
Total Research, Development, Test & Evaluation	256,390	256,494	256,494		
Summary Recap of FYDP Programs -----					
General Purpose Forces	56,481	59,490	59,490		
Intelligence and Communications	199,909	191,249	191,249		
Central Supply and Maintenance					
Administration and Associated Activities		5,113	5,113		
Space		642	642		
Total Research, Development, Test & Evaluation	256,390	256,494	256,494		

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 FY 2019 President's Budget
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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----						
System Development And Demonstration				2,576		2,576
Management Support				22,111		22,111
Operational System Development				231,807		231,807
Total Research, Development, Test & Evaluation				256,494		256,494
Summary Recap of FYDP Programs -----						
General Purpose Forces				59,490		59,490
Intelligence and Communications				191,249		191,249
Central Supply and Maintenance						
Administration and Associated Activities				5,113		5,113
Space				642		642
Total Research, Development, Test & Evaluation				256,494		256,494

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 (Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	2,512		2,512
Management Support	26,467		26,467
Operational System Development	239,761		239,761
Total Research, Development, Test & Evaluation	268,740		268,740
Summary Recap of FYDP Programs			
General Purpose Forces	62,814		62,814
Intelligence and Communications	197,182		197,182
Central Supply and Maintenance	1,317		1,317
Administration and Associated Activities	5,104		5,104
Space	2,323		2,323
Total Research, Development, Test & Evaluation	268,740		268,740

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
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Management Support	12,200	22,111	22,111		
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Total Research, Development, Test & Evaluation	256,390	256,494	256,494		
Summary Recap of FYDP Programs -----					
General Purpose Forces	56,481	59,490	59,490		
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Central Supply and Maintenance					
Administration and Associated Activities		5,113	5,113		
Space		642	642		
Total Research, Development, Test & Evaluation	256,390	256,494	256,494		

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----						
System Development And Demonstration				2,576		2,576
Management Support				22,111		22,111
Operational System Development				231,807		231,807
Total Research, Development, Test & Evaluation				256,494		256,494
 Summary Recap of FYDP Programs -----						
General Purpose Forces				59,490		59,490
Intelligence and Communications				191,249		191,249
Central Supply and Maintenance						
Administration and Associated Activities				5,113		5,113
Space				642		642
Total Research, Development, Test & Evaluation				256,494		256,494

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Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
System Development And Demonstration	2,512		2,512
Management Support	26,467		26,467
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General Purpose Forces	62,814		62,814
Intelligence and Communications	197,182		197,182
Central Supply and Maintenance	1,317		1,317
Administration and Associated Activities	5,104		5,104
Space	2,323		2,323
Total Research, Development, Test & Evaluation	268,740		268,740

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests+ with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Defense Information Systems Agency	256,390	256,494	256,494		
Total Research, Development, Test & Evaluation	256,390	256,494	256,494		

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs

Defense Information Systems Agency				256,494	256,494
Total Research, Development, Test & Evaluation				256,494	256,494

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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Defense Information Systems Agency	268,740		268,740
Total Research, Development, Test & Evaluation	268,740		268,740

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO	S e c
134	0303141K	Global Combat Support System	05	7,600	2,576	2,576			U
		System Development And Demonstration		7,600	2,576	2,576			
177	0305172K	Combined Advanced Applications	06	12,200	16,998	16,998			U
187	0903235K	Joint Service Provider (JSP)	06		5,113	5,113			U
		Management Support		12,200	22,111	22,111			
197	0208045K	C4I Interoperability	07	56,481	59,490	59,490			U
199	0301144K	Joint/Allied Coalition Information Sharing	07	5,464	6,104	6,104			U
202	0302016K	National Military Command System-Wide Support	07	575	1,863	1,863			U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,427	21,564	21,564			U
204	0303126K	Long-Haul Communications - DCS	07	14,861	15,428	15,428			U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,316	15,855	15,855			U
210	0303140K	Information Systems Security Program	07						U
211	0303150K	Global Command and Control System	07	21,438	42,687	42,687			U
212	0303153K	Defense Spectrum Organization	07	12,686	8,750	8,750			U
213	0303228K	Joint Information Environment (JIE)	07	2,789	4,689	4,689			U
214	0303267K	Auctioned Spectrum Relocation Fund	07	11,313					U
215	0303430K	Federal Investigative Services Information Technology	07	75,000	50,000	50,000			U

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134	0303141K	Global Combat Support System	05				2,576		2,576	U
		System Development And Demonstration					2,576		2,576	
177	0305172K	Combined Advanced Applications	06				16,998		16,998	U
187	0903235K	Joint Service Provider (JSP)	06				5,113		5,113	U
		Management Support					22,111		22,111	
197	0208045K	C4I Interoperability	07				59,490		59,490	U
199	0301144K	Joint/Allied Coalition Information Sharing	07				6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07				1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07				21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07				15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07				15,855		15,855	U
210	0303140K	Information Systems Security Program	07							U
211	0303150K	Global Command and Control System	07				42,687		42,687	U
212	0303153K	Defense Spectrum Organization	07				8,750		8,750	U
213	0303228K	Joint Information Environment (JIE)	07				4,689		4,689	U
214	0303267K	Auctioned Spectrum Relocation Fund	07							U
215	0303430K	Federal Investigative Services Information Technology	07				50,000		50,000	U

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Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
134	0303141K	Global Combat Support System	05	2,512		2,512	U
		System Development And Demonstration		2,512		2,512	
177	0305172K	Combined Advanced Applications	06	21,363		21,363	U
187	0903235K	Joint Service Provider (JSP)	06	5,104		5,104	U
		Management Support		26,467		26,467	
197	0208045K	C4I Interoperability	07	62,814		62,814	U
199	0301144K	Joint/Allied Coalition Information Sharing	07				U
202	0302016K	National Military Command System-Wide Support	07				U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	16,561		16,561	U
204	0303126K	Long-Haul Communications - DCS	07	14,769		14,769	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	17,579		17,579	U
210	0303140K	Information Systems Security Program	07	19,611		19,611	U
211	0303150K	Global Command and Control System	07	46,900		46,900	U
212	0303153K	Defense Spectrum Organization	07	7,570		7,570	U
213	0303228K	Joint Information Environment (JIE)	07	7,947		7,947	U
214	0303267K	Auctioned Spectrum Relocation Fund	07				U
215	0303430K	Federal Investigative Services Information Technology	07	39,400		39,400	U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
216	0303610K	Teleport Program	07	657					U
219	0305103K	Cyber Security Initiative	07	1,553	1,686	1,686			U
230	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,049	3,049			U
242	0708012K	Logistics Support Activities	07						U
258	1203610K	Teleport Program	07		642	642			U
		Operational System Development		236,590	231,807	231,807			
Total Research, Development, Test & Eval, DW				256,390	256,494	256,494			

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
216	0303610K	Teleport Program	07							U
219	0305103K	Cyber Security Initiative	07				1,686		1,686	U
230	0305208K	Distributed Common Ground/Surface Systems	07				3,049		3,049	U
242	0708012K	Logistics Support Activities	07							U
258	1203610K	Teleport Program	07				642		642	U
	Operational System Development						231,807		231,807	
Total Research, Development, Test & Eval, DW							256,494		256,494	

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
216	0303610K	Teleport Program	07				U
219	0305103K	Cyber Security Initiative	07				U
230	0305208K	Distributed Common Ground/Surface Systems	07	2,970		2,970	U
242	0708012K	Logistics Support Activities	07	1,317		1,317	U
258	1203610K	Teleport Program	07	2,323		2,323	U
		Operational System Development		239,761		239,761	
Total Research, Development, Test & Eval, DW				268,740		268,740	

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Defense Information Systems Agency
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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO	S e c
134	0303141K	Global Combat Support System	05	7,600	2,576	2,576			U
		System Development And Demonstration		7,600	2,576	2,576			
177	0305172K	Combined Advanced Applications	06	12,200	16,998	16,998			U
187	0903235K	Joint Service Provider (JSP)	06		5,113	5,113			U
		Management Support		12,200	22,111	22,111			
197	0208045K	C4I Interoperability	07	56,481	59,490	59,490			U
199	0301144K	Joint/Allied Coalition Information Sharing	07	5,464	6,104	6,104			U
202	0302016K	National Military Command System-Wide Support	07	575	1,863	1,863			U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,427	21,564	21,564			U
204	0303126K	Long-Haul Communications - DCS	07	14,861	15,428	15,428			U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,316	15,855	15,855			U
210	0303140K	Information Systems Security Program	07						U
211	0303150K	Global Command and Control System	07	21,438	42,687	42,687			U
212	0303153K	Defense Spectrum Organization	07	12,686	8,750	8,750			U
213	0303228K	Joint Information Environment (JIE)	07	2,789	4,689	4,689			U
214	0303267K	Auctioned Spectrum Relocation Fund	07	11,313					U
215	0303430K	Federal Investigative Services Information Technology	07	75,000	50,000	50,000			U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
134	0303141K	Global Combat Support System	05				2,576		2,576	U
		System Development And Demonstration					2,576		2,576	
177	0305172K	Combined Advanced Applications	06				16,998		16,998	U
187	0903235K	Joint Service Provider (JSP)	06				5,113		5,113	U
		Management Support					22,111		22,111	
197	0208045K	C4I Interoperability	07				59,490		59,490	U
199	0301144K	Joint/Allied Coalition Information Sharing	07				6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07				1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07				21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07				15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07				15,855		15,855	U
210	0303140K	Information Systems Security Program	07							U
211	0303150K	Global Command and Control System	07				42,687		42,687	U
212	0303153K	Defense Spectrum Organization	07				8,750		8,750	U
213	0303228K	Joint Information Environment (JIE)	07				4,689		4,689	U
214	0303267K	Auctioned Spectrum Relocation Fund	07							U
215	0303430K	Federal Investigative Services Information Technology	07				50,000		50,000	U

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Defense Information Systems Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
134	0303141K	Global Combat Support System	05	2,512		2,512	U
		System Development And Demonstration		2,512		2,512	
177	0305172K	Combined Advanced Applications	06	21,363		21,363	U
187	0903235K	Joint Service Provider (JSP)	06	5,104		5,104	U
		Management Support		26,467		26,467	
197	0208045K	C4I Interoperability	07	62,814		62,814	U
199	0301144K	Joint/Allied Coalition Information Sharing	07				U
202	0302016K	National Military Command System-Wide Support	07				U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	16,561		16,561	U
204	0303126K	Long-Haul Communications - DCS	07	14,769		14,769	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	17,579		17,579	U
210	0303140K	Information Systems Security Program	07	19,611		19,611	U
211	0303150K	Global Command and Control System	07	46,900		46,900	U
212	0303153K	Defense Spectrum Organization	07	7,570		7,570	U
213	0303228K	Joint Information Environment (JIE)	07	7,947		7,947	U
214	0303267K	Auctioned Spectrum Relocation Fund	07				U
215	0303430K	Federal Investigative Services Information Technology	07	39,400		39,400	U

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Defense Information Systems Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
216	0303610K	Teleport Program	07	657					U
219	0305103K	Cyber Security Initiative	07	1,553	1,686	1,686			U
230	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,049	3,049			U
242	0708012K	Logistics Support Activities	07						U
258	1203610K	Teleport Program	07		642	642			U
		Operational System Development		236,590	231,807	231,807			
Total Defense Information Systems Agency				256,390	256,494	256,494			

Defense Information Systems Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018		FY 2018	FY 2018	FY 2018	S
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	
216	0303610K	Teleport Program	07						U
219	0305103K	Cyber Security Initiative	07				1,686	1,686	U
230	0305208K	Distributed Common Ground/Surface Systems	07				3,049	3,049	U
242	0708012K	Logistics Support Activities	07						U
258	1203610K	Teleport Program	07				642	642	U
		Operational System Development					231,807	231,807	
Total Defense Information Systems Agency							256,494	256,494	

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Defense Information Systems Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
216	0303610K	Teleport Program	07				U
219	0305103K	Cyber Security Initiative	07				U
230	0305208K	Distributed Common Ground/Surface Systems	07	2,970		2,970	U
242	0708012K	Logistics Support Activities	07	1,317		1,317	U
258	1203610K	Teleport Program	07	2,323		2,323	U
		Operational System Development		239,761		239,761	
Total Defense Information Systems Agency				268,740		268,740	

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
177	06	0305172K	Combined Advanced Applications.....	Volume 5 - 165
187	06	0903235K	Joint Service Provider.....	Volume 5 - 167

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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203	07	0302019K	Defense Info. Infrastructure Engineering and Integration.....	Volume 5 - 205
204	07	0303126K	Long-Haul Communications - DCS.....	Volume 5 - 223
205	07	0303131K	Minimum Essential Emergency Communications Network (MEECN).....	Volume 5 - 243
210	07	0303140K	Information Systems Security Program.....	Volume 5 - 255
211	07	0303150K	Global Command and Control System.....	Volume 5 - 263
212	07	0303153K	Defense Spectrum Organization.....	Volume 5 - 277
213	07	0303228K	Joint Information Environment.....	Volume 5 - 287
215	07	0303430K	Federal Investigative Services Information Technology.....	Volume 5 - 295
216	07	0303610K	Teleport Program.....	Volume 5 - 303
219	07	0305103K	Cybersecurity Initiative.....	Volume 5 - 311
230	07	0305208K	Distributed Common Ground/Surface Systems.....	Volume 5 - 317
242	07	0708012K	Logistics Support Activities.....	Volume 5 - 325
258	07	1203610K	Teleport Program.....	Volume 5 - 331

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Combined Advanced Applications	0305172K	177	06.....	Volume 5 - 165
Cybersecurity Initiative	0305103K	219	07.....	Volume 5 - 311
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Defense Spectrum Organization	0303153K	212	07.....	Volume 5 - 277
Distributed Common Ground/Surface Systems	0305208K	230	07.....	Volume 5 - 317
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Global Combat Support System	0303141K	134	05.....	Volume 5 - 155
Global Command and Control System	0303150K	211	07.....	Volume 5 - 263
Information Systems Security Program	0303140K	210	07.....	Volume 5 - 255
Joint Information Environment	0303228K	213	07.....	Volume 5 - 287
Joint Service Provider	0903235K	187	06.....	Volume 5 - 167
Joint/Allied Coalition Information Sharing	0301144K	199	07.....	Volume 5 - 189
Logistics Support Activities	0708012K	242	07.....	Volume 5 - 325
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Minimum Essential Emergency Communications Network (MEECN)	0303131K	205	07.....	Volume 5 - 243
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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	258.585	7.600	2.576	2.512	-	2.512	1.578	1.708	2.135	2.211	Continuing	Continuing
CS01: <i>Global Combat Support System</i>	258.585	7.600	2.576	2.512	-	2.512	1.578	1.708	2.135	2.211	Continuing	Continuing

Program MDAP/MAIS Code: 483

A. Mission Description and Budget Item Justification

Global Combat Support System - Joint (GCSS-J), is a key enabler for achieving Focused Logistics and is essential during peace, contingency, crisis, and war in support of the joint warfighter across the full range of military operations. GCSS-J, the Logistics System of Record, provides a Joint Logistics Common Operational Picture to ensure the right personnel, equipment, supplies, and support are in the right place at the right time and in the right quantities to mobilize, move, and sustain all elements of operating forces within a theater or operational area.

GCSS-J gathers data from authoritative sources to provide a fused, integrated, near real-time, multidimensional view of combat support and combat service support across joint capability areas. These efforts provide situational awareness of the battlespace and logistics pipeline (e.g., supply, deployment and distribution, engineering, etc.). Using GCSS-J, the joint logistics warfighter no longer needs to log into multiple legacy systems and manually gather data to compile reports. GCSS-J provides real time actionable information in the form of watchboards (e.g., fuels and munitions watchboards) and near real time information in the form of reports and mapping visualizations.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	7.600	2.576	2.534	-	2.534
Current President's Budget	7.600	2.576	2.512	-	2.512
Total Adjustments	0.000	0.000	-0.022	-	-0.022
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	0.000	-0.022	-	-0.022

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	

Change Summary Explanation

The decrease of -\$0.022 in FY 2019 is due a reduction to Joint Logistics Common Operational Picture (LogCOP) support to the logisticians as they plan, execute, control, and assess in an increasingly complex global environment. Additionally, the decrease reduces the overall pace and scope of GCSS development efforts to meet Joint Staff logistics operational needs and transition to the C2 framework.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>				Project (Number/Name) CS01 / <i>Global Combat Support System</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
CS01: <i>Global Combat Support System</i>	258.585	7.600	2.576	2.512	-	2.512	1.578	1.708	2.135	2.211	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Global Combat Support System – Joint (GCSS-J) provides the warfighter with a single, end-to-end capability to manage and monitor personnel and equipment through the mobilization process. GCSS-J, the Logistics' System of Record, provides a Joint Logistics Common Operational Picture (JLogCOP), ensuring the right personnel, equipment, supplies, and support are in the right place, at the right time, and in the right quantities across the full spectrum of military operations.

GCSS-J gathers data from authoritative sources to provide fused, integrated, near real-time multidimensional view of combat support and combat service support across joint capability areas. These efforts provide situational awareness of the battlespace and logistics pipeline (e.g., Supply, Deployment and Distribution, Engineering, etc.). Using GCSS-J, the joint logistics warfighter no longer needs to log into multiple legacy systems and manually gather data to compile reports. GCSS-J provides real-time in the form of reports and mapping visualizations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Global Combat Support System-Joint	7.600	2.576	2.512
Description: GCSS-J is a key enabler for achieving Focused Logistics and is essential during peace, contingency, crisis, and war in support of the joint warfighter across the full range of military operations. GCSS-J, the Logistics System of Record, provides a Joint Logistics Common Operational Picture (LogCOP) to ensure the right personnel, equipment, supplies, and support are in the right place at the right time and in the right quantities to mobilize, move, and sustain all elements of operating forces within a theater or operational area.			
FY 2018 Plans: The GCSS-J PMO will continue to meet the JS J-4 approved and prioritized functional requirements to support the joint logistics community providing a fused, integrated, near real-time view of combat support and combat service support throughout the battlespace and the logistics pipeline through interoperability and connectivity of information system.			
The decrease of -\$5.024 from 2017 to FY 2018 reduces Joint Logistics Common Operational Picture (LogCOP) support to the logisticians as they plan, execute, control, and assess in an increasingly complex global environment. Additionally, the decrease reduces the overall pace and scope of GCSS development efforts to meet Joint Staff logistics operational needs. Part of the overall decrease (-\$0.274) is attributed to the Service Requirements Review Board (SSRB) contract reduction.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
The GCSS-J PMO will continue to meet the JS J-4 approved and prioritized functional requirements to support the joint logistics community providing a fused, integrated, near real-time view of combat support and combat service support throughout the battlespace and the logistics pipeline through interoperability and connectivity of information system.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The decrease of -\$0.064 from FY 2018 to FY 2019 is the result of a reduction in Joint Logistics Common Operational Picture (LogCOP) contract requirements.			
Accomplishments/Planned Programs Subtotals	7.600	2.576	2.512

C. Other Program Funding Summary (\$ in Millions)										
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u> <u>Total Cost</u>
• O&M, DW/PE 0303141K: O&M, DW	17.668	17.337	17.383	-	17.383	17.375	17.505	17.720	-	Continuing Continuing

Remarks

D. Acquisition Strategy

The GCSS-J Program Management Office (PMO) uses various contract types, employs large and small contractors, and is focused on achieving agency socio-economic goals and incorporating DoD acquisition reform initiatives in purchasing. The PMO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. The PMO evaluates performance by conducting thorough Post-award Contract Reviews, monthly Contract Performance Reviews, and bi-monthly In-Process Reviews.

The PMO uses a Statement of Objectives (SOO) for development efforts rather than the traditional Statement of Work, as it provides potential offerors flexibility to develop cost-effective solutions and the opportunity to propose innovative alternatives to meet GCSS-J requirements. By stating the requirements in a SOO, the contractor can produce a technical solution methodology to deliver leading edge technology to the warfighter.

E. Performance Metrics

GCSS-J fields capabilities based on functional priorities of the Combatant Command 129 Requirements Document as approved and prioritized by the functional sponsor, Joint Staff J4. These requirements and goals are translated into releases with specific capabilities, which have established cost, schedule, and performance parameters approved by the DISA's Component Acquisition Executive/Milestone Decision Authority.

Metrics and requirements are routinely gathered by the GCSS-J PMO. The metrics from the strategic server sites are analyzed by the PMO to ensure that operational mission threads continue to be met and if system enhancement/capabilities are of benefiting the user. Future capabilities include tools that allow GCSS-J to refine and enhance the type of performance metrics that can be gathered and analyzed. These tools become increasingly important as GCSS-J continues to integrate additional

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
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data sources and external applications, which allows GCSS-J to continue to transition to a Service Oriented Architecture and directly supports DoD's net-centric vision of exposing and consuming web services. As GCSS-J usage increases and new capabilities are fielded, performance metrics will ensure that the system is meeting user requirements.

1. Mission and Business Results and Strategic National and Theater Defense

FY 2017 (Actual) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data will be gathered from the First Look Site during development and from surveys once the capability is deployed. FY17 Target: 95%

FY 2018 (Estimate) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data will be gathered from the First Look Site during development and from surveys once the capability is deployed. FY18 Target: 95%

FY 2019 (Estimate) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data will be gathered from the First Look Site during development and from surveys once the capability is deployed. FY19 Target: 95%

2. Customer Results and Customer Satisfaction

FY 2017 (Actual) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data will be gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY17 Target: 80%

FY 2018 (Estimate) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data will be gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY18 Target: 80%

FY 2019 (Estimate) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data will be gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY19 Target: 80%

3. Processes and Activities and Program Monitoring

FY 2017 (Actual) Baseline Measure – To deploy Increment 8, v8.2 in 3rd Quarter 2017.

FY 2018 (Estimate) Baseline Measure – To deploy Increment 8, v8.3 in 2nd Quarter 2018.

FY 2019 (Estimate) Baseline Measure – To deploy Increment 8, v8.4 in 2nd Quarter 2019.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
4. Technology and System Development		
<p>FY 2017 (Actual) Baseline Measure is the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers will gather data from system logs to validate effectiveness. FY17 Target: 95%</p> <p>FY 2018 (Estimate) Baseline Measure is the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers will gather data from system logs to validate effectiveness. FY18 Target: 95%</p> <p>FY 2019 (Estimate) Baseline Measure is the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers will gather data from system logs to validate effectiveness. FY19 Target: 95%</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development 1	C/T&M	Enterworks : Sterling, VA	8.745	0.000		-		-		-		-	0.000	8.745	8.745
Product Development 2	C/T&M	WFI (DSI) : Manassas, VA	4.125	0.000		-		-		-		-	0.000	4.125	4.125
Product Development 3	C/CPAF	NGIT : Herndon, VA	127.849	-		-		-		-		-	0.000	127.849	127.849
Product Development 4	C/T&M	SAIC : Falls Church, VA	17.061	0.000		-		-		-		-	0.000	17.061	17.061
Product Development 5	C/FFP	NGIT, : Reston, VA	27.051	0.000		-		-		-		-	0.000	27.051	27.051
Product Development 6	SS/FFP	UNISYS, : Falls Church, VA	16.472	0.000		-		-		-		-	0.000	16.472	16.472
Product Development 7	MIPR	FGM, : Reston, VA	5.482	0.000		-		-		-		-	0.000	5.482	5.482
Product Development 8	SS/FFP	Merlin, : McLean, VA	1.664	0.000		-		-		-		-	0.000	1.664	1.664
Product Development 9	MIPR	JDTC, : Ft. Eustis, VA	2.423	0.000		-		-		-		-	0.000	2.423	2.423
Product Development 10	MIPR	CSC, : Norfolk, VA	0.300	0.000		-		-		-		-	0.000	0.300	0.300
Product Development 11	C/FFP	Pragmatics : Reston, VA	6.730	6.570	May 2017	1.546	May 2018	1.774	May 2019	-		1.774	Continuing	Continuing	Continuing
Subtotal			217.902	6.570		1.546		1.774		-		1.774	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation 1	C/CPFF	COMTEK, : Sterling, VA	3.902	0.000		-		-		-		-	0.000	3.902	3.902
Test & Evaluation 2	MIPR	SSO, : Montgomery	0.500	0.000		-		-		-		-	0.000	0.500	0.500
Test & Evaluation 3	MIPR	DIA : WDC	3.785	-		-		-		-		-	0.000	3.785	3.785
Test & Evaluation 4	C/CPFF	Pragmatics : Pragmatics	1.684	0.000		-		-		-		-	0.000	1.684	1.684
Test & Evaluation 5	C/CPFF	AAC, Inc., : Vienna, VA	2.790	0.000		-		-		-		-	0.000	2.790	2.790

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation 6	MIPR	JITC, : Ft. Huachuca, AZ	7.032	0.600	Oct 2016	0.600	Oct 2017	0.486	Oct 2018	-		0.486	Continuing	Continuing	Continuing
Test & Evaluation 7	MIPR	STRATCOM (DAA) : Bolling AFB, DC	0.792	0.170	Jul 2016	0.170	Sep 2018	0.157	Sep 2019	-		0.157	Continuing	Continuing	Continuing
Test & Evaluation 8	MIPR	DISA (TE LAB Support) : Fort Meade, MD	1.364	0.100	Oct 2016	0.100	Oct 2017	0.095	Oct 2018	-		0.095	Continuing	Continuing	Continuing
Test & Evaluation 9	MIPR	DISA FSO Security Testing Support : Fort Meade, MD	0.030	0.160	Oct 2016	0.160	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Subtotal			21.879	1.030		1.030		0.738		-		0.738	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Services 1	FFRDC	MITRE, : Vienna, VA	16.934	-		-		-		-		-	0.000	16.934	16.934
Management Services 2	SS/CPFF	UMD, : Eastern Shore, MD	1.021	-		-		-		-		-	0.000	1.021	1.021
Management Services 3	MIPR	IDA, : Alexandria, VA	0.749	-		-		-		-		-	0.000	0.749	0.749
Management Services 4	MIPR	JFCOM, : Norfolk, Va	0.100	-		-		-		-		-	0.000	0.100	0.100
Subtotal			18.804	-		-		-		-		-	0.000	18.804	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		258.585	7.600	2.576	2.512	2.512	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Development & Testing - Increment 8	[REDACTED]																											
Full Deployment Decision - Increment 8	[REDACTED]																											
Acquisition Events - Milestone B/C: Increment 9 - MS B	[REDACTED]																											
Acquisition Events - Milestone B/C: Increment 9 - MS C	[REDACTED]																											
System Development & Testing - Increment 9	[REDACTED]																											
System Development & Testing - Increment 10	[REDACTED]																											
Full Deployment Decision - Increment 9	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Development & Testing - Increment 8	2	2017	4	2019
Full Deployment Decision - Increment 8	4	2019	4	2019
Acquisition Events - Milestone B/C: Increment 9 - MS B	1	2020	1	2020
Acquisition Events - Milestone B/C: Increment 9 - MS C	3	2020	3	2020
System Development & Testing - Increment 9	4	2020	4	2023
System Development & Testing - Increment 10	4	2020	2	2023
Full Deployment Decision - Increment 9	1	2021	1	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0305172K / <i>Combined Advanced Applications</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	12.200	16.998	21.363	-	21.363	12.437	5.436	5.436	5.435	Continuing	Continuing
CA1: <i>Combined Advanced Applications</i>	0.000	12.200	16.998	21.363	-	21.363	12.437	5.436	5.436	5.435	Continuing	Continuing

A. Mission Description and Budget Item Justification

The increase of +\$6.863 in FY 2019 is classified and exhibit will be provided under a separate cover.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	12.200	16.998	14.500	-	14.500
Current President's Budget	12.200	16.998	21.363	-	21.363
Total Adjustments	0.000	0.000	6.863	-	6.863
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	0.000	-	6.863	-	6.863

Change Summary Explanation

Program is classified and exhibit will be provided under a separate cover.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0305172K / <i>Combined Advanced Applications</i>	Project (Number/Name) CA1 / <i>Combined Advanced Applications</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
CA1: <i>Combined Advanced Applications</i>	0.000	12.200	16.998	21.363	-	21.363	12.437	5.436	5.436	5.435	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Program is classified and exhibit will be provided under a separate cover.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Combined Advanced Applications	12.200	16.998	21.363
Description: Classified.			
FY 2018 Plans: Classified.			
FY 2019 Plans: Classified.			
FY 2018 to FY 2019 Increase/Decrease Statement: Classified.			
Accomplishments/Planned Programs Subtotals	12.200	16.998	21.363

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Classified

E. Performance Metrics

Classified

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0903235K <i>I Joint Service Provider</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	5.113	5.104	-	5.104	5.090	5.176	5.066	5.100	Continuing	Continuing
JSP: <i>Joint Service Provider</i>	0.000	0.000	5.113	5.104	-	5.104	5.090	5.176	5.066	5.100	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Service Provider (JSP) provides Information Technology infrastructure and office automation systems, components, supporting software, and IT support services for the Office of the Secretary of Defense (OSD), Joint Staff, WHS, Pentagon Force Protection Agency (PFPA), Consolidated Adjudication Facility (CAF), and other WHS-supported users and communities supported within the Pentagon Reservation and other areas in the National Capitol Region. The funding levels represent transfers from the legacy organizations, WHS-EITSD and Joint Staff support their ongoing consolidated mission. RDT&E provides for the test, pilot, and development of new integrated business tools to enhance the JSP business processes and improve the delivery of IT services and capabilities to JASN.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	5.113	5.148	-	5.148
Current President's Budget	0.000	5.113	5.104	-	5.104
Total Adjustments	0.000	0.000	-0.044	-	-0.044
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.044	-	-0.044

Change Summary Explanation

The decrease of \$0.044 in FY 2019 is due to a reduction in the strategic framework support service contract.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0903235K / Joint Service Provider				Project (Number/Name) JSP / Joint Service Provider			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JSP: Joint Service Provider	0.000	0.000	5.113	5.104	-	5.104	5.090	5.176	5.066	5.100	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Service Provider (JSP) provides mobile classified computing and communications platforms technology test and development for the immediate Office of the Secretary of Defense, enabling secured computing at residence, temporary and mobile locations around the world.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Pentagon/NCR Core Enterprise Services</p> <p>Description: Provides development, test, and pre-deployment for JSP-supported services to include network transport, network security, computer network defense, intrusion detection, Pentagon Installation Processing Node (IPN), and other components of the Pentagon's core network infrastructure.</p> <p>FY 2018 Plans: Develop, test, and pre-deploy JSP-supported services to include network transport, network security, computer network defense, intrusion detection, Pentagon Installation Processing Node (IPN), and other components of the Pentagon's core network infrastructure.</p> <p>The increase of +\$3.871 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.</p> <p>FY 2019 Plans: Develop, test, and pre-deploy JSP-supported services to include network transport, network security, computer network defense, intrusion detection, Pentagon Installation Processing Node (IPN), and other components of the Pentagon's core network infrastructure.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$.059 from FY 2018 to FY 2019 will enable development of new methodologies for conducting tests on JSP pre-deployed support services for network transport, network security and other components of the Pentagon/NCR infrastructure.</p>	-	3.871	3.930
<p>Title: SECDEF Communications</p> <p>Description: Provides mobile classified computing and communications platforms technology test and development for the immediate Office of the Secretary of Defense, enabling secured computing at residence, temporary and mobile locations around the world.</p> <p>FY 2018 Plans:</p>	-	0.101	0.103

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0903235K / <i>Joint Service Provider</i>	Project (Number/Name) JSP / <i>Joint Service Provider</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>To develop better mobile classified computing and communications platforms for all customers to have secure computing at residences and temporary and mobile locations around the world.</p> <p>The increase of +\$0.101 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.</p> <p>FY 2019 Plans: To develop better mobile classified computing and communications platforms for all customers to have secure computing at residences and temporary and mobile locations around the world.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$.002 from FY 2018 to FY 2019 is due to an increase in engineering contract support for technical projects.</p>			
<p>Title: Business Solutions - Enterprise Services</p> <p>Description: Provides development, testing, piloting, and pre-deployment support for integrated business tools that will enhance JSP-supported enterprise mission application environment.</p> <p>FY 2018 Plans: Develop and test tools that will improve the delivery of IT services and capabilities for all JSP users. JSP will continue to expand the engineering, testing and development networks for NIPR and SIPR.</p> <p>The increase of +\$1.141 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.</p> <p>FY 2019 Plans: Develop and test tools that will improve the delivery of IT services and capabilities for all JSP users. JSP will continue to expand the engineering, testing, and development networks for NIPR and SIPR.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: A decrease of -\$0.070 from FY2018 to FY2019 is attributed to the reduction in the number of engineering project test hours conducted on the NIPR and SIPR networks.</p>	-	1.141	1.071
Accomplishments/Planned Programs Subtotals	-	5.113	5.104

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency Date: February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 6	PE 0903235K / <i>Joint Service Provider</i>	JSP / <i>Joint Service Provider</i>

E. Performance Metrics

Pentagon/NCR Core Enterprise Services:

Number of NCR Core Infrastructure development, test, and pre-deployment tests

FY17 Target: N/A

FY18 Target: 4 Planned/4 Required

FY19 Target: 4 Planned, 100% Pentagon Enterprise CNDS Services

SECDEF Communications:

Number of System upgrades

FY 2017 Target: N/A

FY 2018 Target: 2 Planned/2 Required

FY 2019 Target: 2 Planned/2 Required

Business Solutions - Enterprise Services:

Number of Operational Test Events for the NIPR and SIPR

FY 2017 Target: N/A

FY 2018 Target: 2 Planned/2 Required

FY 2019 Target: 2 Planned/2 Required

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	694.448	56.481	59.490	62.814	-	62.814	61.074	68.127	63.026	64.603	Continuing	Continuing
T30: <i>MRTFB Test and Evaluation</i>	160.235	14.069	7.732	7.809	-	7.809	7.664	7.825	7.824	8.042	Continuing	Continuing
T40: <i>Major Range Test Facility Base Operations</i>	534.213	42.412	51.758	55.005	-	55.005	53.410	60.302	55.202	56.561	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Systems Agency's Joint Interoperability Test Command (JITC) serves as the only joint element of the Department of Defense's (DoD's) Major Range and Test Facility Base (MRTFB) that is operated primarily for Information Technology and National Security Systems (IT/NSS) Test and Evaluation (T&E) support missions. JITC executes the T&E mission in support of Command, Control, Communications, Computers and Intelligence (C4I), and is the DoD's Sole Interoperability Certifier and the only Non-Service Operational Test Agency.

With a focus on T&E for IT, JITC has the unique mission to provide consistent, structured, and effective T&E services that include converged information environment, Cyber, Cloud services, Mobility and NSS. JITC also has the responsibility for ensuring Joint/Coalition interoperability; issuing interoperability certifications; conducting operational evaluations; maintaining a federated IT infrastructure as a MRTFB activity and providing direct interoperability support to the warfighter by ensuring Joint warfighting capabilities are interoperable and support mission needs.

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	57.501	59.490	60.649	-	60.649
Current President's Budget	56.481	59.490	62.814	-	62.814
Total Adjustments	-1.020	0.000	2.165	-	2.165
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-1.020	0.000	2.165	-	2.165

Change Summary Explanation

The decrease of -\$1.020 in 2017 is the result of increased use of virtualization and cloud technologies to provide automation and services.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity
0400: *Research, Development, Test & Evaluation, Defense-Wide / BA 7:*
Operational Systems Development

R-1 Program Element (Number/Name)
PE 0208045K / *C4I Interoperability*

The increase of +\$2.165 in FY 2019 will provide increased infrastructure, network bandwidth, and instrumentation to support development and testing of enterprise systems and Cyber capabilities in a replicated Department of Defense Information Network (DoDIN) environment.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability				Project (Number/Name) T30 / MRTFB Test and Evaluation			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T30: MRTFB Test and Evaluation	160.235	14.069	7.732	7.809	-	7.809	7.664	7.825	7.824	8.042	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Information Systems Agency (DISA), through the Joint Interoperability Test Command (JITC), manages the Department's Interoperability Test, Evaluation, and Certification process that is structured to provide meaningful and independent test results in order to increase stakeholder confidence. The objectives, of the Test and Evaluation (T&E) activities, are to validate that DISA's (and the Department's, where appropriate) deliverables have met operational requirements. The T&E activities target evaluation strategies in the design, development, operational, integration and/or sustainment aspects of every program requiring support. DISA's T&E efforts span a variety of test categories supporting DISA's delivery of Department-wide enterprise solutions as well as Service, Agency, and mission partner developmental, operational, Information Assurance, and interoperability testing, validation and certification efforts. These efforts are focused on T&E for Information Technology (IT) that includes the Joint Information Environment (JIE), Cyber, Cloud services, and Mobility.

As the Department of Defense (DoD) Joint Interoperability Certification Authority, JITC annually:

- Issues hundreds of interoperability testing and certification related products.
- Manages the scheduling and executes multiple annual distributed Joint Tactical Data Link hardware in the loop interoperability test events. These events are designed to evaluate, certify and re-certify Service/Agency Tactical Data systems.
- Reviews hundreds of Joint Capabilities Integration and Development System documents, interoperability support plans and Legacy Waiver requests on behalf of the DoD Chief Information Officer (CIO) and the Joint Staff.
- Serves as executive agent to DoD Interoperability Steering Group, in support of the DoD CIO, and uses this forum to coordinate policy, adjudicate issues, and to process Interim Certificates to Operate.
- Ensures interoperability test and certification standard practices and procedures are in accordance with DoD policy, and reviews and issues over 600 Joint interoperability certifications annually for DoD's Information Technology and National Security Systems (IT/NSS).
- Manages the scheduling and prioritization of multiple annual distributed Joint Tactical Data Link simulated test events using real components (hardware in the loop interoperability test events) designed to evaluate, certify and re-certify Service/Agency Tactical systems.

JITC provides interoperability test support to Joint, Coalition and Allied operations in theater by providing Interoperability test support within the area of responsibility and supports exercises intended to evaluate Joint, Coalition and Allied operations in, or planning to deploy to theater by:

- Providing on-demand rapid response contingency support to Regional Combatant Commands (COCOMs) as required, and conducting assessments of interoperability exercises.
- Conducting assessments during one of the largest interoperability exercises (the Endeavors).
- Broadening its support to the Joint Staff and functional COCOMs with a multitude of interoperability assessment services.
- Maintaining a 24x7 Warfighter Command, Control, Communications, Computers and Intelligence (C4I) Interoperability Hotline that connects warfighters to subject matter experts to resolve IT interoperability challenges.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T30 / <i>MRTFB Test and Evaluation</i>
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- Establishing the framework for the conduct of annual independent evaluations and the status of interoperability through DoD Interoperability Communications Exercises (DICE).
- Emulating a distributed Joint Task Force network, providing realism and operational significance during the assessments and evaluations of data integrity, interfacing and responsiveness coupled with efficient configuration tactics, techniques, and procedures.
- Including first responder local and federal communications as part of the task force.

As the only non-Service Operational Test Agency (OTA) within DoD, JITC conducts operational testing of IT/NSS under realistic conditions to determine the operational effectiveness, suitability, interoperability, and security; and independently assesses the operational impact of system issues on mission accomplishment. JITC is the OTA for DISA-managed programs, and also upon request serves as the OTA for other Agencies such as the Defense Logistics Agency, Department of Homeland Security, and the National Security Agency.

JITC designs Operational Test and Evaluation (OT&E) events to determine if IT/NSS meet user requirements, offering sustaining support services to users to assist Acquisition Program Managers with meeting their overall milestone objectives.

JITC focuses its efforts towards core T&E improvements, better T&E policy for IT/NSS and designing new test methodologies to better assess Enterprise Service systems, aligning with the Information Technology Service Management model evaluating fulfillment services for suitability.

The T&E project supports the strategy development and investment plans in support of maintaining, improving and operating the DISA Major Range and Test Facility Base (MRTFB). Specific goals for DISA's MRTFB each year are to:

- Integrate evolving technologies that are able to leverage efficiencies such as virtualization, enterprise elements such as Infrastructure as a Service and Platform as a Service, and the foundational Cyber assets mandated by the JIE.
- Expand test infrastructure and operations to allow for rapid, on-demand provisioning, and federation across the DoD and Cyber integration with enterprise environments.
- Design consistent, repeatable test methodologies that ensure efficient T&E on changing or emerging technologies.
- Provide T&E guidance/oversight to nearly 130 DISA programs, creating synergy and efficiencies across the large DISA IT portfolio, gaining insight in new technologies and commercial best practices.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: DoD's Joint Interoperability Certification Authority</p> <p>Description: Plans and executes interoperability certifications for Department of Defense's (DoD) Information Technology and National Security Systems (IT/NSS) by evaluating joint military operations, conformance to standards, and participating in developmental testing or executing purposefully planned Interoperability Test Events.</p> <p>FY 2018 Plans:</p>	13.149	6.812	6.889

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Increase customer accessibility through enhanced T&E capabilities by employing automation technologies via the cloud in a self-service mode. Continue to reduce risk and identify/analyze trends by employing new technology and methodology to conduct data analysis in the operational environment.</p> <p>The reduction of -\$6.337 from FY 2017 to FY 2018 is due to realignment between T30 MRTFB Test & Evaluation and T40 Major Range Test Facility Base Operations to improve the expansion of automation and virtualization capabilities of DISA IT testing and evaluation services.</p> <p>FY 2019 Plans: Continue to evolve customer accessibility through enhanced T&E capabilities by employing automation technologies to include cloud services. Continue to reduce risk and identify/analyze trends by employing new technology and methodology to conduct data analysis in the operational environment.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$0.077 from FY 2018 to FY2019 will enable refresh and modernization of T&E infrastructure and instrumentation tools that support test and evaluation of Cyber, Cloud Mobility and Enterprise capabilities.</p>			
<p>Title: Operational Test and Evaluation</p> <p>Description: Conduct operational testing of IT/NSS under realistic operational conditions to determine the operational effectiveness, suitability, interoperability, and security of a particular system. Independently assesses the operational impact of system issues on mission accomplishment.</p> <p>FY 2018 Plans: Will continue to enhance OT&E processes, procedures, and tools by increasing automation and utilizing virtualization as needed, to better evaluate performance and to improve operational testing capabilities for evolving requirements. Will continue to provide OT&E support to COCOMs, Military Services, and Defense Agencies as requested.</p> <p>FY 2019 Plans: Will continue to enhance OT&E processes, procedures, training, and tools by increasing automation, data collection and management, and better analysis utilizing virtualization to better evaluate performance and to improve operational testing capabilities for evolving requirements. Will continue to provide OT&E support to COCOMs, Military Services, and Defense Agencies as requested.</p>	0.800	0.800	0.800
<p>Title: Support to Warfighter</p> <p>Description: Provides pre/post-production evaluations including: collecting relevant data during a continuous monitoring effort, and providing on-the-spot evaluations of problem areas and viable mission-oriented solutions to warfighting COCOMs during exercises and contingency operations.</p>	0.120	0.120	0.120

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p><i>FY 2018 Plans:</i> Support will continue to be focused primarily on the Asia Pacific region, consistent with the National Defense Strategy. Will sustain a Warfighter Support capability sufficient to respond to critical fielded system issues only.</p> <p><i>FY 2019 Plans:</i> Support will continue to be focused primarily on the Asia Pacific region, consistent with the National Defense Strategy. Will sustain a Warfighter Support capability sufficient to respond to critical fielded system issues only.</p>			
Accomplishments/Planned Programs Subtotals	14.069	7.732	7.809

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

T&E Mission Support Services (MSS) cost plus and firm fixed price contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions. The T&E MSS contract provides for expansion and contraction of staff years as workload dictates.

E. Performance Metrics

JITC manages the Department's Joint Interoperability Test, Evaluation, and Certification process and Operational testing for Information Technology (IT)/National Security Systems (NSS) as well as test and evaluation activities for DISA's deliverables ensuring they have met operational requirements. JITC develops test and evaluation strategies, plan, and reports in the design, development, operational, integration and/or sustainment aspects of every program requiring support. Specific metrics are described below:

1. Metric: Provide operational test plans prior to the start date of a test for all customers where JITC is the OTA.

Measure/Goal: 90%

FY17 Actual: 100%

FY18 Target: 90%

FY19 Target: 90%

2. Metric: Provide operational test reports no later than 60 days after the completion of a test event when JITC is the responsible OTA.

Measure/Goal: 90%

FY17 Actual: 82.4%

FY18 Target: 90%

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T30 / <i>MRTFB Test and Evaluation</i>
FY19 Target: 90%		
3. Provide a interoperability certification letter to customers (JS, COCOMS,AT&L, etc) no later than 60 days from the completion of the test event/effort. Measure/Goal: 95% FY17 Actual: 82.7% FY18 Target: 80% FY19 Target: 80%		
4. JITC surveys customers for each product that is delivered (POA&Ms, test Plans, Test Reports, etc.) in terms of cost, schedule, and overall performance on a 1-5 scale with 5 being the highest rating. Measure/Goal: 4.5 FY17 Actual: 4.5 FY18 Target: 4.5 FY19 Target: 4.6		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	C/T&M	Northop Grumman Mission System : FT Huachuca, AZ	36.487	-		-		-		-		-	Continuing	Continuing	-
Test and Evaluation	C/T&M	Interop Joint Venture : FT Huachuca, AZ	44.342	-		-		-		-		-	Continuing	Continuing	-
Test and Evaluation	C/T&M	Northop Grumman Technology : FT Huachuca, AZ	25.831	-		-		-		-		-	Continuing	Continuing	-
Test and Evaluation	C/Various	Various : Various	15.076	-		-		-		-		-	Continuing	Continuing	-
Test and Evaluation	Option/CPFF	ALION SCIENCE & TECH CORP : Various	0.004	0.004	Oct 2016	0.006	Oct 2017	0.010	Oct 2018	-		0.010	Continuing	Continuing	-
Test and Evaluation	Option/CPFF	AMERICAN SYSTEMS CORP : Various	0.066	0.063	Oct 2016	0.075	Oct 2017	0.080	Oct 2018	-		0.080	Continuing	Continuing	-
Test and Evaluation	Option/CPFF	MANTECH TELECOMMUNICATIONS AND INFORMATION : Various	0.293	0.277	Oct 2015	0.290	Oct 2017	0.305	Oct 2018	-		0.305	Continuing	Continuing	-
Test and Evaluation	Option/CPFF	OBERON ASSOCIATES : Various	0.056	0.053	Oct 2016	0.061	Oct 2017	0.072	Oct 2018	-		0.072	Continuing	Continuing	-
Test and Evaluation	Option/CPFF	TASC, INC : Various	0.776	1.111	Oct 2016	1.115	Oct 2017	1.132	Oct 2018	-		1.132	Continuing	Continuing	-
Subtotal			122.931	1.508		1.547		1.599		-		1.599	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Managment Services	C/Various	Defense Information Systems Agency : Various	37.304	12.561	Oct 2016	6.185	Oct 2017	6.210	Oct 2018	-		6.210	Continuing	Continuing	-
Subtotal			37.304	12.561		6.185		6.210		-		6.210	Continuing	Continuing	N/A
Project Cost Totals			160.235	14.069		7.732		7.809		-		7.809	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>MRTFB Test and Evaluationb</i>																												
Provide Operational Test & Evaluation (OT&E) of DISA acquired systems																												
Conduct Joint interoperability test and certification on IT/NSS using the Joint Family of Tactical Data Link (TDL)																												
Operate 24/7 Interoperability Hotline																												
Provide Joint/Combined Interoperability Test support to Combatant Commanders																												
Provide JIE Compliance Test and Evaluation framework and infrastructure																												
Provide Cyberspace Test and Evaluation framework and infrastructure																												
Plan and conduct the Defense Interoperability Communications Exercise (DICE)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T30 / <i>MRTFB Test and Evaluation</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>MRTFB Test and Evaluation</i>				
Provide Operational Test & Evaluation (OT&E) of DISA acquired systems	1	2017	4	2023
Conduct Joint interoperability test and certification on IT/NSS using the Joint Family of Tactical Data Link (TDL)	1	2017	4	2023
Operate 24/7 Interoperability Hotline	1	2017	4	2023
Provide Joint/Combined Interoperability Test support to Combatant Commanders	2	2017	4	2023
Provide JIE Compliance Test and Evaluation framework and infrastructure	1	2017	4	2023
Provide Cyberspace Test and Evaluation framework and infrastructure	1	2017	4	2023
Plan and conduct the Defense Interoperability Communications Exercise (DICE)	3	2017	1	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability				Project (Number/Name) T40 / Major Range Test Facility Base Operations			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T40: Major Range Test Facility Base Operations	534.213	42.412	51.758	55.005	-	55.005	53.410	60.302	55.202	56.561	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the only non-Service activity of the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB), Defense Information Systems Agency (DISA) provides the only dedicated Information Technology (IT) environment investing in a single end-to-end infrastructure for testing the Enterprise Edge to the Tactical Edge. As an MRTFB, Joint Interoperability Test Command (JITC) provides tested IT infrastructure products to the DoD, Federal/non-Federal Government, Commercial vendors, and Allied partners.

The DISA MRTFB infrastructure:

- Encompasses two geographic locations (Ft. Huachuca, AZ; Indian Head, MD; Ft. Meade, MD).
- 116K square feet of raised floor space comprised of multiple test environments and test networks supporting over a 100 programs on an annual basis.
- Complies with multiple levels of security and is scaled to support approximately 1,000 annual testing events to evaluate the DoD's converged information environment, Cyber, Cloud services, Mobility, and National Security Systems (NSS).
- Encompasses a significant portfolio of reference implementations, test tools, and supporting IT systems to aid both test execution and data collection/analysis.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: MRTFB Improvements and Operations	42.412	51.758	55.005
Description: Information Technology and National Security Systems (IT/NSS), Command and Control (C2), Defense reform initiatives, and the Department of Defense's (DoD's) migration towards more agile development and acquisition of IT capabilities by providing Test and Evaluation (T&E) support, including infrastructure, testing capabilities and events, policies and processes to Regional Combatant Commands (COCOMS), Military Services, DoD Agencies, other Federal Government agencies, private industry, Coalition partners and allies.			
FY 2018 Plans: As an MRTFB, JITC will continue to operate the DISA IT Test infrastructure standardized test bed at Fort George G. Meade, MD and Fort Huachuca, AZ. JITC will continue to support the Agency and the Department by expanding the use of cloud technologies			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T40 / Major Range Test Facility Base Operations

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>to provide seamless distributed testing services and efficient use of testing equipment and resources. JITC will continue to maintain technical workforce, support base operations, communications, and operating expenses at each location.</p> <p>The increase of +\$9.356 from FY 2017 to FY 2018 will adapt additional cloud technologies through rapid re-configurations resulting in the development of a single DoDIN Lab Test-bed. This increase is partially offset by a decrease of -\$0.822 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p> <p>FY 2019 Plans: As an MRTFB, JITC will continue to operate the DISA IT Test infrastructure standardized test bed at Fort George G. Meade, MD and Fort Huachuca, AZ. JITC will continue to support the Agency and the Department by expanding the use of cloud technologies to provide seamless distributed testing services and efficient use of testing equipment and resources. JITC will continue to maintain technical workforce, support base operations, communications, and operating expenses at each location.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$3.247 from FY 2018 to FY 2019 will provide increased infrastructure, network bandwidth, and instrumentation to support development and testing of enterprise systems and Cyber capabilities in a replicated DoDIN environment.</p>			
Accomplishments/Planned Programs Subtotals	42.412	51.758	55.005

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

A T&E Mission Support Services (MSS) cost plus and firm fixed price contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions. The T&E MSS contract provides maximum flexibility and allow for expansion and contraction of staff years as workload dictates. An additional contract is a Federal Preferential Sole Source Procurement set-aside which provides consolidated facilities support.

E. Performance Metrics

Major Range Test Facility Base (MRTFB) Operations sustain the infrastructure, capabilities and services of DISA's MRTFB. While maintaining a focus on improving automation, instrumentation and virtualization, this MRTFB is working toward ensuring assets support customers with testing on demand services to enable rapid delivery of enhanced military capabilities. Specific metrics are described below:

5. Provide configuration changes to the MRTFB infrastructure NLT 5 days after formal customer service request received.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T40 / <i>Major Range Test Facility Base Operations</i>
<p>Measure/Goal: 90% FY17 Actual: 98% FY18 Target: 95% FY19 Target: 95%</p> <p>6. Complete new configuration additions (equipment installs) NLT 14 days after receipt of customer requirements form. Measure/Goal: 90% FY17 Actual: 100% FY18 Target: 95% FY19 Target: 95%</p> <p>7. Availability of enterprise service test capabilities T&E enclave. Measure/Goal: 95% FY17 Actual: 99% FY18 Target: 95% FY19 Target: 95%</p> <p>8. Availability of the Tactical Data Link Standard Conformance test tool to various DoD platforms (e.g., weapons systems). Measure/Goal: 95% FY17 Actual: 100% FY18 Target: 95% FY19 Target: 95%</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency											Date: February 2018				
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability					Project (Number/Name) T40 / Major Range Test Facility Base Operations				

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation 1	C/T&M	Northrop Grumman Mission System : Ft. Huachuca, AZ	75.279	-		-		-		-		-	0.000	75.279	75.279
Test and Evaluation 2	C/T&M	Interop Joint Venture : Ft. Huachuca, AZ	99.188	-		-		-		-		-	0.000	99.188	99.188
Test and Evaluation 3	C/T&M	Northrop Grumman Information Technology : Ft. Huachuca, AZ	49.746	-		-		-		-		-	0.000	49.746	49.746
Test and Evaluation 4	C/Various	VARIOUS - pending development of query : VARIOUS	54.481	-		-		-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 5	Option/CPFF	ALION SCIENCE & TECHNOLOGY CORP : Various	0.218	0.192	Oct 2016	0.207	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 6	Option/CPFF	AMERICAN SYSTEMS COPR : Various	0.551	0.485	Oct 2016	0.523	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 7	Option/CPFF	MANTECH TELECOMMUNICATIONS AND INFORMATION : Various	3.502	3.081	Oct 2016	3.320	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 8	Option/CPFF	OBERON ASSOCIATES : Various	5.297	4.660	Oct 2016	5.023	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 9	Option/CPFF	TASC, INC. : Various	1.397	1.229	Oct 2016	1.325	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 10	Option/CPFF	BEACON GROUP SW, INC : Various	8.614	7.579	Oct 2016	7.450	Oct 2017	7.711	Oct 2018	-		7.711	Continuing	Continuing	Continuing
Test and Evaluation 11	Option/CPFF	Multiple : Various	-	-		-		13.001	Oct 2018	-		13.001	Continuing	Continuing	Continuing
Test and Evaluation 12	C/CPFF	TBD : TBD	8.696	8.032		8.658	Oct 2017	8.961	Oct 2018	-		8.961	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T40 / Major Range Test Facility Base Operations
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			306.969	25.258		26.506		29.673		-		29.673	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Services	Various	Defense Information Systems Agency : Ft. Huachuca, AZ	227.244	17.154	Oct 2016	25.252	Oct 2017	25.332	Oct 2018	-		25.332	Continuing	Continuing	Continuing
Subtotal			227.244	17.154		25.252		25.332		-		25.332	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
	Project Cost Totals	534.213	42.412	51.758	55.005	-	55.005	Continuing	Continuing

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency			Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T40 / Major Range Test Facility Base Operations	

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Develop and Implement Interoperability test systems to support warfighters	[REDACTED]																											
	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T40 / Major Range Test Facility Base Operations

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop and Implement Interoperability test systems to support warfighters	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	80.595	5.464	6.104	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
NND: <i>Multinational Information sharing</i>	80.595	5.464	6.104	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Through the Combined Enterprise Regional Information Exchange System (CENTRIXS) and Pegasus, the Multinational Information Sharing (MNIS) Program enables secure sharing of operational and intelligence information and enhances collaboration between United States (US) forces, trusted allies and other multinational partners. This effort also increases overall combat effectiveness by leveraging capabilities and information from all partners and reducing the possibility of fratricide. These coalition information sharing systems are in direct support of the Department of Defense's (DoD's) strategic goals to "Win our Nation's Wars" and "Deter conflict and promote security". The MNIS program supports five Combatant Commands (COCOMs) with connectivity in 89 nations, the North America Treaty Organization, 11 Bilateral agreements and 150 sites with over 80,000 users worldwide. MNIS also evaluates new technologies and develops tactics, techniques and procedures to facilitate the integration of emerging technologies and capabilities into operational multinational information sharing capability. The integration of new technology for CENTRIXS and Pegasus is accomplished through research, integration, and testing using the Combined Federated Battle Laboratory Network.

A planned improvement to the CENTRIXS coalition network, Common Mission Network Transport (CMNT), will provide distinct and permanent transport capabilities; enabling network operation centers to priority command and control information more efficiently. CMNT supports DoD instruction 8110.1 guidance for integrating CENTRIXS and other operational networks into existing DoD general service communications infrastructure as a separate network servicing all DoD MNIS requirements. This capability provides a common transport for encrypted traffic. CMNT will be the established encrypted network to facilitate the movement of virtual private network traffic between segments.

The MNIS emerging capability, Unclassified Information Sharing Services (UISS), extends US information sharing capabilities to mission partners providing enterprise-level solutions that allow COCOMs to share unclassified information with US Government agencies and non-traditional partners such as, host nations, intergovernmental organizations, and nongovernmental organizations. The employment concept for the UISS is to implement enterprise Web-based, "non-mil" platform, available to as broad a community as needed to support mission operations, with worldwide, 24 hour-a-day, seven day-a-week access, to any user with an Internet connection, including web-enabled mobile personal devices. Using an Internet-based capability and an integrated suite of commercial-off-the-shelf collaboration tools the UISS capability will enable unclassified information exchanges and ad-hoc communications for shared communities of interest and issue-specific groups among and across organizations and individuals.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	5.935	6.104	5.413	-	5.413
Current President's Budget	5.464	6.104	0.000	-	0.000
Total Adjustments	-0.471	0.000	-5.413	-	-5.413
• Congressional General Reductions	-0.471	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-5.413	-	-5.413

Change Summary Explanation

The decrease of -\$5.413 in FY 2019 is the result of the Joint/Allied Coalition Information Sharing program being functionally transferred to the Air Force beginning in FY 2019.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>				Project (Number/Name) NND / <i>Multinational Information sharing</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
NND: <i>Multinational Information sharing</i>	80.595	5.464	6.104	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Multinational Information Sharing (MNIS) Program is a portfolio of four coalition information sharing capabilities designed to enable and improve sharing of operational and intelligence information among United States (US) forces and multinational partners.

1) Combined Enterprise Regional Information Exchange System (CENTRIXS), supports intelligence and classified operations at the Secret Releasable level. There are multiple, cryptographically-isolated CENTRIXS enclaves serving various communities of interest (COI) that support multinational efforts including Overseas Contingency Operations and counter-narcotics operations. CENTRIXS is regionally focused and combatant command (COCOM) centric. The MNIS Program Management Office provides selected centralized services from two Defense Enterprise Computing Centers for five of the 40+ CENTRIXS networks/COIs, and engineering support for standardized solutions.

2) Pegasus connects the national Command and Control (C2) systems of Combined Communications Electronics Board (CCEB) Nations including Australia, Canada, New Zealand, United Kingdom and the US, using commercial-off-the-shelf security appliances and cross domain solutions that facilitate situational awareness and operational planning/execution. Pegasus has a strategic focus and is member nation centric.

3) The Combined Federated Battle Laboratory Network (CFBLNet) provides a controlled coalition Research, Development, Trials and Assessment coalition information sharing “sandbox” for the US, CCEB Nations, North Atlantic Treaty Organization (NATO), and other mission essential nations. This sandbox is used to evaluate new technologies and to develop tactics, techniques and procedures that facilitate the transition of promising technologies and capabilities into operational multinational information sharing capability enhancements. CFBLNet's direct customers are the CCEB nations’ military operational and intelligence entities led by their US counterparts at the COCOM and Agency levels. It is being used for the Coalition Warrior Interoperability Demonstrations, NATO missile defense initiatives, and by the Intelligence, Surveillance and Reconnaissance community to test capabilities prior to deployment.

4) The Unclassified Information Sharing Service (UISS) extends US information sharing capabilities to mission partners, enterprise-level solutions that allow COCOMs to share unclassified information with other US Government agencies, host nations, inter-governmental organizations, non-governmental organizations, and other partners.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Multinational Information Sharing	5.464	6.104	0.000
Description: Through the CENTRIXS and Pegasus, the MNIS Program enables secure sharing of operational and intelligence information and enhances collaboration among US forces, most trusted allies and additional multinational partners. The MNIS			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Program also initiated a capability to support enhancements for the UISS-All Partners Access (APAN). UISS-APAN migrated existing systems supporting coalition sharing to an enterprise solution hosted on a DISA Defense Enterprise Computing Center. UISS-APAN capability will satisfy COCOM needs for tools and technology to support collaboration with non-traditional partners for humanitarian missions.</p> <p>FY 2018 Plans: CENTRIXS CMNT: Continue leveraging technology refresh activities for integration of legacy CENTRIXS environments to gain efficiencies in virtualization consolidation for storage and services to reduce sustainment costs. Plan for integration and testing of additional core services to mission partners.</p> <p>Pegasus: Plan to perform testing and integration activities for Coalition Network Operations Center (CNOC) and National-level Network Operations Center (NNOC) Five Eyes (FVEY) (AUS/CAN/NZL/US/USA) Nations capabilities.</p> <p>CFBLNet: Plan to perform testing and integration activities for technical refresh of Wide Area Network (WAN) infrastructure to support Research and Development, Training, Trials & Assessment (RDTT&A) initiatives on a recurring annual basis. Support testing and integration for virtualized infrastructure for Cross Domain Enterprise Services.</p> <p>UISS-APAN: Plan to perform cloud platform integration and testing for the Unclassified information sharing capabilities supporting Humanitarian Assistance & Disaster Relief (HA/DR) efforts.</p> <p>The increase of +\$0.640 from FY 2017 to FY 2018 provides an increase in testing and integration activities for MPE Episodic and Enduring capabilities to implement virtualized technologies for Classified COIs.</p> <p>FY 2019 Plans: N/A</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease of -\$6.104 from FY 2018 to FY 2019 is the result of the Joint/Allied Coalition Information Sharing program being functionally transferred to the Air Force beginning in FY 2019.</p>			
Accomplishments/Planned Programs Subtotals	5.464	6.104	0.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019	FY 2019	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Cost To	
			Base	OCO	Total					Complete	Total Cost
• O&M, DW/0301144K: O&M, DW	47.629	46.665	0.000	-	0.000	0.000	0.000	0.000	0.000	-	Continuing Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019	FY 2019	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Cost To	
			Base	OCO	Total					Complete	Total Cost
• Proc, DW/0301144K: <i>Proc, DW</i>	0.623	0.708	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Performance-based contracts are primarily used for this support. MNIS maximizes the use of competitive awards and uses various contract types, employs large and small contractors, and is focused to achieve agency socio-economic goals and incorporate DoD acquisition reform initiatives. MNIS evaluates performance by conducting thorough Post-award Contract Reviews, monthly Contract Performance Reviews, and monthly In-Process Reviews.

E. Performance Metrics

Measure:

-% of design, testing and integration activities for MNIS classified technology refresh projects complete (9 Nodes) – 100%

Performance Metric:

-Information Assurance (Classified)

FY17 Actual: Targets Meet

FY18 Estimate: Expected to Meet

Methodology:

-Technology Refreshes Projects – 100%

-Direct traffic with 99.99% accuracy for chat, email, VOIP, file transfer, data storage and web service.

Measure:

-Number of CFBLNet Exercises/Events hosted

Performance Metric:

-Annual number of CFBLNet Exercises hosted ≥ 2 Exercises Hosted (Empire Challenge & CWIX)

FY17 Actual: Targets Meet

FY18 Estimate: Expected to Meet

-Annual number of Test Bed Exercise ≥ 16 Test Events Hosted (Estimate): Met

FY17 Actual: Targets Meet

FY18 Estimate: Expected to Meet

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>

Methodology:

-Number of exercises hosted per Fiscal Year

Measure:

Cloud integration, Development, Integration, Testing (Unclassified)

Performance Metric:

% of Cloud Development, Testing, Integration and Implementation Complete = 100%

FY17 Actual: Targets Meet

FY18 Estimate: Expected to Meet

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Cross Domain Chat	C/CPFF	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Cross Domain Solutions Ops Capabilities Spt	C/CPFF	HAI/Raytheon : Alexandria, VA	11.781	-		-		-		-		-	Continuing	Continuing	-
Cross Domain Chat - develop & tech services	C/CPFF	Harris Corporation : Alexandria, VA	15.149	-		-		-		-		-	Continuing	Continuing	-
Cross Domain Solutions -- operational capabilities support	C/CPFF	CACI : Chantilly, VA	0.650	-		-		-		-		-	Continuing	Continuing	-
Subtotal			27.580	-		-		-		-		-	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Federally Funded Research Develop Center (FFRDC)	C/CPFF	MITRE : Arlington VA	8.328	0.800	Oct 2017	0.329	Oct 2017	-		-		-	Continuing	Continuing	-
Program Support	C/CPFF	Ingenium and SAIC : Upper Marlboro & DC	1.522	-		-		-		-		-	Continuing	Continuing	-
Engineering Support	C/CPFF	Raytheon : Arlington, VA	9.580	-		-		-		-		-	Continuing	Continuing	-
DoD Services	MIPR	Various - SPAWAR and Pacific : Warfighting Ctr Hawaii	4.110	-		-		-		-		-	Continuing	Continuing	-
Project Planning and Management	C/CPFF	Harris Corporation : Alexandria, VA	5.315	-		-		-		-		-	Continuing	Continuing	-
Engineering Support	C/CPFF	CACI : Chantilly, VA	0.975	0.093	Oct 2017	-		-		-		-	Continuing	Continuing	-
Project Planning	C/CPFF	TBD : TBD	0.777	1.115	Oct 2017	-		-		-		-	Continuing	Continuing	-
Engineering Support	C/CPFF	TBD : TBD	1.889	1.800	Oct 2017	-		-		-		-	Continuing	Continuing	-
Classified	MIPR	---- : ----	9.069	-		-		-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Support	C/CPFF	BAH : TBD	-	-		0.721	May 2018	-		-		-	Continuing	Continuing	-
Engineering T&E Hardware	C/CPFF	Primere : Primere	-	-		0.612	Jul 2018	-		-		-	Continuing	Continuing	-
Coalition T&E	C/CPFF	JITC : Ft. Meade	-	-		0.769	Jan 2018	-		-		-	Continuing	Continuing	-
SETA Engineering	C/FFP	TBD : TBD	-	-		0.600	Sep 2018	-		-		-	Continuing	Continuing	-
Engineering Support	MIPR	Various - SPAWAR and Pacific Warfighting Ctr : Hawaii	-	-		2.576	Nov 2017	-		-		-	Continuing	Continuing	-
Engineering Support	C/CPFF	TBD : TBA	-	-		0.497	Jul 2018	-		-		-	Continuing	Continuing	-
Subtotal			41.565	3.808		6.104		-		-		-	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Coalition Lab T&E, IAVA STIG	MIPR	JITC : Fort Meade, MD	11.450	1.656	Oct 2017	-		-		-		-	Continuing	Continuing	-
Subtotal			11.450	1.656		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		80.595	5.464	6.104	-	-	-	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

MULTINATIONAL INFORMATION SHARING (MNIS) - Current Systems																												
CENTRIX Capability																												
CMNT																												
JITC Testing Security/C&A																												
CFBLNet																												
UIS																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>MULTINATIONAL INFORMATION SHARING (MNIS) - Current Systems</i>				
CENTRIX Capability	1	2017	4	2018
CMNT	1	2017	4	2018
JITC Testing Security/C&A	1	2017	4	2018
CFBLNet	1	2017	4	2018
UIS	1	2017	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	7.253	0.575	1.863	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S32: <i>NMCS Command Center Engineering</i>	7.253	0.575	1.863	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The National Military Command System (NMCS), operated by the Chairman of the Joint Chiefs of Staff, provides the President, Secretary of Defense, and other national senior leaders the ability to maintain situational and operational awareness and command and control of military forces in all crisis and/or national emergency contingencies. DISA's NMCS engineering program meets the NMCS systems engineer responsibilities, per Department of Defense Directive (DoDD) S-5100.44 and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3280.01B, to provide the Joint Staff with operationally efficient and cost-effective engineering solutions to ensure that components and facilities satisfy operational requirements including emergency messaging, situational awareness, crisis action, and information management.

The NMCS engineering program is vital in supporting the government's ability to safeguard national security and respond to contingencies globally and/or nuclear war. NMCS engineering focuses on implementing collaborative tools into current and crisis operations areas, integrating adequate back-up storage and recovery of voice, video and data across the continental United States to support key leaders, transitioning nuclear command and control to Internet Protocol based networks, migrating data and voice network to next generation satellites, implementing modern cryptological devices, and utilizing wireless networking to support warning systems and situational awareness. In addition, NMCS engineering continues to maintain the NMCS Reference Guide required by DoDD S-5100.44 and to develop engineering and test plans for the installation of hardware and software systems utilized within the NMCS.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.575	1.863	1.849	-	1.849
Current President's Budget	0.575	1.863	0.000	-	0.000
Total Adjustments	0.000	0.000	-1.849	-	-1.849
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-1.849	-	-1.849

Change Summary Explanation

A decrease of -\$1.849 in FY2019 is attributed to a realignment of funding from RDT&E to the Operations & Maintenance appropriation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>				Project (Number/Name) S32 / <i>NMCS Command Center Engineering</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>S32: NMCS Command Center Engineering</i>	7.253	0.575	1.863	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The National Military Command System (NMCS), operated by the Chairman of the Joint Chiefs of Staff, provides the President, Secretary of Defense, and other national senior leaders the ability to maintain situational and operational awareness and command and control of military forces in all crisis and/or national emergency contingencies. DISA's NMCS engineering program meets the NMCS systems engineer responsibilities, per Department of Defense Directive (DoDD) S-3710.01 and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3280.01C, to provide the Joint Staff with operationally efficient and cost-effective engineering solutions to ensure that components and facilities satisfy operational requirements including emergency messaging, situational awareness, crisis action, and information management.

The NMCS engineering program is vital in supporting the government's ability to safeguard national security and respond to contingencies globally and/or nuclear war. NMCS engineering focuses on implementation of collaborative tools into current and crisis operations areas, the integration of adequate back-up storage and recovery of voice, video and data across the continental United States to support key leaders, transition of nuclear command and control to Internet Protocol (IP)-based networks, migration of data and voice network to next generation satellites, implementation of modern crypto-logical devices, and the utilization of wireless networking to support warning systems and situational awareness. In addition, NMCS engineering continues to maintain the NMCS Reference Guide (NRG) required by DoDD S-3710.01 and to develop engineering and test plans for the installation of hardware and software systems utilized within the NMCS.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: NMCS Systems Engineering	0.575	1.863	0.000
FY 2018 Plans: Will continue to engineering and integrate the modernization of NMCS capabilities (e.g. transition platforms, data interfaces, security and graphical user interfaces) as the NMCS Systems Engineer IAW CJCSI 3280 and CJCSI 5119. Will focus on the improvement of collaborative services, and the integration of new transport mediums that facilitate C3 services. Integrate applicable portions of the NMCS into the National Leadership Command Capability (NLCC) portfolio.			
The increase of +\$1.288 from FY 2017 to FY 2018 is due to application of the NLCC Configuration Management process to applicable NMCS systems and to provide engineering support for Northstar and SATSTAR services transition to new NLCC transport infrastructure. This increase is partially offset by a decrease of -\$0.079 attributed to the Service Requirements Review Board (SSRB) contract reduction.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>	Project (Number/Name) S32 / <i>NMCS Command Center Engineering</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
N/A			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> A decrease of -\$1.863 from FY 2018 to FY2019 is attributed to a realignment of funding from RDT&E to the Operations & Maintenance appropriation.			
Accomplishments/Planned Programs Subtotals	0.575	1.863	0.000

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M, DW/PE 0302016K: O&M, DW	3.156	4.306	5.882	-	5.882	5.999	6.095	6.163	6.317	Continuing	Continuing

Remarks

D. Acquisition Strategy

During FY2018 a full and open competition will be conducted for an NLCC Systems Engineering and Technical Assistance (SETA) contract to provided programmed support to JSEIO in FY2018 as follow-on to the previous contract with Raytheon, Arlington, VA.

E. Performance Metrics

The JSEIO conducts regularly scheduled In-progress Program Reviews (IPRs) and Configuration Control Board (CCB) meetings to monitor status of engineering projects/tasks. Each current project/task is evaluated in terms of how well the technical work is progressing and how allocated resources are being utilized. Adjustments to resources, schedules, and technical directions are made, as required. Future projects/tasks are also discussed, thereby ensuring an integrated approach is maintained across all related project/task areas. To further increase the utility of the IPR/CCB structure, the Joint Staff customer participates in the project/task reviews. The result of this approach is a truly integrated effort of NMCS Engineering, contractor, and Joint Staff working together to achieve common program goals. Suitable products are delivered within allocated resources and delivered on schedule 90% of the time.

The NMCS met all FY 2017 performance metrics and is on track to meet its FY 2018 metrics by delivering suitable products on schedule and within allocated resources 100% of the time.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency												Date: February 2018			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0302016K / National Military Command System-Wide Support				Project (Number/Name) S32 / NMCS Command Center Engineering							
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	C/CPFF	Raytheon E-Sys : Arlington VA	7.253	0.575	Jan 2017	1.863	Jan 2018	-		-		-	Continuing	Continuing	-
Subtotal			7.253	0.575		1.863		-		-		-	Continuing	Continuing	N/A
			Prior Years	FY 2017	FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			7.253	0.575	1.863		-		-		-	Continuing	Continuing	N/A	
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>	Project (Number/Name) S32 / <i>NMCS Command Center Engineering</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

NMCS	
Maintenance/Update of NMCS Reference Guide (ongoing-real-time)	[Redacted]
Maintenance/Update of the PCC Toolkit	[Redacted]
Completion of Study: NC2 over IP	[Redacted]
Completion of SHF Upgrade	[Redacted]
Inspection/Maintenance of HEMP sites in the NCR	[Redacted]
Moderinize Non-Secure Conferencing Networks	[Redacted]
Implement PCC Dashboard	[Redacted]
Milstar Cryptological Modernization	[Redacted]

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>	Project (Number/Name) S32 / <i>NMCS Command Center Engineering</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NMCS				
Maintenance/Update of NMCS Reference Guide (ongoing-real-time)	1	2017	4	2018
Maintenance/Update of the PCC Toolkit	1	2017	2	2018
Completion of Study: NC2 over IP	1	2017	2	2018
Completion of SHF Upgrade	1	2017	1	2018
Inspection/Maintenance of HEMP sites in the NCR	4	2017	4	2018
Moderinize Non-Secure Conferencing Networks	4	2017	1	2018
Implement PCC Dashboard	4	2017	1	2018
Milstar Cryptological Modernization	4	2017	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	127.155	18.427	21.564	16.561	-	16.561	15.719	16.199	16.439	16.791	Continuing	Continuing
E65: <i>Modeling and Simulation</i>	84.358	7.885	9.251	4.783	-	4.783	4.396	4.571	4.654	4.743	Continuing	Continuing
T62: <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>	42.797	10.542	12.313	11.778	-	11.778	11.323	11.628	11.785	12.048	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Infrastructure Engineering and Integration effort encompasses two projects: Modeling and Simulation and DoD Information Network (DODIN) Systems Engineering and Support. There are two major activities under the Modeling and Simulation project: Modeling and Simulation and DODIN Enterprise Wide Systems Engineering (EWSE).

The DODIN EWSE activity resolves near term (one to three years) high-priority technical issues defined by DoD Chief Information Officer (DoD CIO) and Defense Information Systems Agency (DISA), that impact operational capabilities affecting DODIN End-to-End (E2E) interoperability and performance.

The Modeling and Simulation project provides architecture, systems engineering and E2E analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include DoD CIO, the DISA Network Services Directorate, the DISA Enterprise Services Directorate, Program Executive Office-Mission Assurance, the Defense Information Systems Network Command Center and Joint Communications Simulation System users in DoD.

The DoDIN Systems Engineering and Support project performs discovery, research, development and experimentation of emerging and commercial technologies through the Office of the Chief Technology Officer (OCTO) to fill capability shortfalls and technology gaps across the Future Years Defense Program (FYDP). The OCTO identifies these gaps/shortfalls, pursues leading innovative solutions from industry, academia, and the Federal sector, and engages industry partners for commercial best practices. The OCTO Develops technology forecasts and innovation roadmaps for existing and nascent DISA Programs in the following areas: Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DoDIN/Mobile/End-User Devices). The OCTO conducts technical system engineering reviews and oversight of DISA and DoD enterprise products and services. The OCTO performs early identification of technology needs and explores, develops, and delivers recommended emerging technologies to the DISA Requirements & Analysis Office.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	18.041	21.564	22.009	-	22.009
Current President's Budget	18.427	21.564	16.561	-	16.561
Total Adjustments	0.386	0.000	-5.448	-	-5.448
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	0.386	-	-5.448	-	-5.448

Change Summary Explanation

The increase of +\$0.386 in FY 2017 is attributed to increased efforts in the modeling and simulation support for the architecture, systems engineering and E2E analytical functions.

The decrease of -\$5.448 in FY 2019 is due to the completion of reviews on future innovation and emerging technologies within DoD requirements. This realigns resources from RDT&E to O&M to focus from development of Mission and Business Case Analysis, to include ROI analysis, as required for senior decision makers in strategic assessments, analysis of alternatives, and mission partner support.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>E65: Modeling and Simulation</i>	84.358	7.885	9.251	4.783	-	4.783	4.396	4.571	4.654	4.743	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Modeling and Simulation project provides architecture, systems engineering and end-to-end (E2E) analytical functions for the Defense Information Systems Agency (DISA) and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Modeling and Simulation activities support the Department of Defense (DoD) communications planning and investment strategy, including: application performance assessments, contingency planning, network capacity planning and diagnostics, and systems-level modeling and simulation. Project efforts provide across-theater information awareness for Combatant Commands through application solutions for integrated networks, including DoD's missions in Afghanistan and the Defense Information Systems Network (DISN) by: (1) supporting the development and implementation of DoD Information Network (DODIN) Enterprise Wide Systems Engineering (EWSE) processes essential to evolving the DODIN in a manner that enables interoperability and E2E performance for critical DODIN programs; (2) developing standardized DISA systems analyses and integration processes to improve systems integration across DISA for all DISA developed communication systems and services; and (3) providing the underlying modeling and simulation and analytical support for E2E DISA and DoD systems engineering and assessment.

Project efforts provide DoD decision makers with services and a suite of tools capable of identifying key points of impact on DoD command and control information systems and recommending trade-offs within the DODIN configuration with regard to prioritized performance, availability, and security. This effort will reduce the risk in products deployed to the warfighter through improved network performance and traffic analysis, and an efficient means of troubleshooting and subsequent redesign.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Modeling and Simulation	7.885	9.251	4.783
FY 2018 Plans:			
Will develop modeling and simulation tools to analyze planned changes to the DISN optical and IP core network, data centers, internet and commercial cloud computing gateways, and network security solutions. Will develop capabilities for analysis of software defined networking. Will perform test and evaluation of DISN Internet Access Point security solutions with government and contracted labor support. Will research technologies and solutions that can be transitioned to operations and will demonstrate feasibility through solutions analysis and proof-of-concept development and test. Will perform product and solution assessments using developed modeling tools to provide technical solutions for IT capabilities to ensure compatibility and interoperability with the DISN, data centers, and JIE solution architectures. Will develop application performance monitoring framework to support reliable operation of enterprise services and applications.			
The increase of +\$1.366 from FY 2017 to FY 2018 is attributed to increased efforts in evaluating tools and solutions for a regional defensive cyber security systems, performance of cloud computing and security. Additionally, the increase is associated with test			

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B. Accomplishments/Planned Programs (\$ in Millions)

<p>and evaluation of larger scale software defined data centers and network function virtualization. This increase is partially offset by a decrease of -\$0.207 is attributed to the Service Requirements Review Board (SSRB) contract reduction.</p> <p>FY 2019 Plans: Will develop modeling and simulation tools to analyze planned changes to the DISN optical and IP core network, data centers, internet and commercial cloud computing gateways, and network security solutions. Will develop capabilities for analysis of software defined networking. Will perform test and evaluation of DISN Internet Access Point security solutions with government and contracted labor support. Will research technologies and solutions that can be transitioned to operations and will demonstrate feasibility through solutions analysis and proof-of-concept development and test. Will perform product and solution assessments using developed modeling tools to provide technical solutions for IT capabilities to ensure compatibility and interoperability with the DISN, data centers, and JIE solution architectures. Will develop application performance monitoring framework to support reliable operation of enterprise services and applications.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease of -\$4.468 from FY 2018 to FY 2019 is due to the completion of reviews on future innovation and emerging technologies within DoD requirements. Funding is being realigned to O&M to focus on adapting current DoD requirements to DISA strategic capabilities; from developing, engineering and testing solutions to providing IT systems analysis, requirements analysis, cost analysis, and acquisition expertise to develop Mission and Business Case Analysis, and NSCAR (NIPRNet / SIPRNet Cyber Security Architecture Review) requirement for the development of a quantitative analysis tool.</p>	FY 2017	FY 2018	FY 2019
Accomplishments/Planned Programs Subtotals	7.885	9.251	4.783

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0302019K: <i>Operation & Maintenance, Defense-Wide</i>	15.989	15.606	16.437	-	16.437	16.579	16.911	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

EWSE uses contractors to assist/supplement the Government lead/team for technical activities. Subject matter experts in both large and small businesses are sought for the engineering support. Firm fixed price contracts with one option year are typically used in open competition. Furthermore, technical work with Federally Funded Research and Development Centers (FFRDCs) such as MITRE and MIT Lincoln Lab are established and coordinated when the Government can leverage their expertise and R&D in the key technology.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>
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Modeling and Simulation uses a range of contractors for modeling support to the various projects. Contractors range from small to large business, predominantly using open competition methods and Firm Fixed Price (FFP) tasks and utilizing multi-year (base plus option years) contracts where possible. Support includes network modeling tool and processes development to adapt to ever-evolving OSD/DISA programs and projects, analyses, capacity planning, and network redesign using the models. Some specific support (e.g., integration with proprietary software) will require contracting with OPNET (e.g., sole source). FFRDCs are also considered depending upon the task.

E. Performance Metrics

DISN core transport bandwidth sufficiency, tied to capacity planning and activation of bandwidth in the DISN optical core to keep at least 25% spare capacity, to allow for provisioning of unforeseen requirements and rerouting under outages.

DISN IP Core bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of DISN IP Core and NIPRNet backbone circuits under 65% during daily peak periods.

DISN SIPRNet bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of SIPRNet backbone circuits under 50% during daily peak periods.

The EWSE projects will be measured by the number of technical studies performed with associated systems engineering artifacts (market research reports, technology assessments, solutions analyses, etc.) that are developed to support DODIN capabilities; and the number of proof-of-concept demonstrations or pilots executed to support viability of the technical approach/recommendation. These products will be coordinated with the stakeholders, users and/or Program Management Offices (PMO) to ensure EWSE provides the right deliverables for solution development decisions.

FY 2017 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations. FY 2017 target met: Completed 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.

FY 2018 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.

FY 2019 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.

The Modeling and Simulation project provides architecture, systems engineering and E2E analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include DoD Enterprise Activities, the DODIN and DISA applications, as well as engineering capabilities support to programs and projects to address technical and engineering solutions to activities such as information assurance and cyber security; mobility and cloud technologies and warfighter and mission support activities.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration	Project (Number/Name) E65 / Modeling and Simulation
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development 1	SS/FFP	OPNET Tech, Inc : Bethesda, MD	7.404	1.102	Aug 2017	1.449	Aug 2018	1.451	Oct 2018	-		1.451	Continuing	Continuing	Continuing
Product Development 2	C/CPFF	APPTIS : Chantilly, VA	1.822	-		1.812	Aug 2018	1.583	Oct 2018	-		1.583	Continuing	Continuing	Continuing
Product Development 3	SS/FFP	Falls Church, VA : Falls Church, VA	1.312	-		-		-		-		-	0.000	1.312	1.312
Product Development 4	C/FFP	Booz Allen, Hamilton : McLean, VA	3.779	0.554	Jan 2017	0.648	Aug 2018	0.652	Oct 2018	-		0.652	Continuing	Continuing	Continuing
Product Development 5	C/FFP	NRL : Washington, DC	0.100	-		-		-		-		-	0.000	0.100	0.100
Product Development 6	C/CPFF	Soliel, LLC : Reston, VA	3.862	-		-		-		-		-	0.000	3.862	3.862
Product Development 7	C/FFP	COMPTEL : Arlington, VA	2.805	-		-		-		-		-	0.000	2.805	2.805
Product Development 8	C/CPFF	COMPTEL : Arlington, VA	0.926	-		-		-		-		-	0.000	0.926	0.926
Product Development 9	C/CPFF	MIT Lincoln Labs : Cambridge, MA	9.639	1.800	Dec 2016	2.080	Dec 2017	-		-		-	Continuing	Continuing	Continuing
Product Development 10	MIPR	Various : Various	7.469	2.032	Dec 2016	2.342	Dec 2017	-		-		-	Continuing	Continuing	Continuing
Enterprise Wide Systems Engineering 11	C/FFP	Northrop Grumman : Fairfax, VA	1.784	-		-		-		-		-	0.000	1.784	1.784
Clear Sky Pilot	C/CPFF	AFRL Terremark : TBD	24.083	-		-		-		-		-	0.000	24.083	24.083
Narus	C/CPFF	AFRL : Rome, NY	1.450	-		-		-		-		-	0.000	1.450	1.450
Cyber Accelerator	C/CPFF	DTIC : Alexandria, VA	7.516	-		-		-		-		-	0.000	7.516	7.516
Commercial Integration Demonstration	C/CPFF	DTIC : Alexandria, VA	2.750	-		-		-		-		-	0.000	2.750	2.750
Web Content Filtering: Perimeter Defense Integration	C/FFP	Oberon Associates : Ft. Meade, MD	1.854	-		-		-		-		-	0.000	1.854	1.854

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration	Project (Number/Name) E65 / Modeling and Simulation
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Host Based Security Ops Assessment	C/FFP	Summit Technologies, Inc : Ft Meade, MD	0.700	-		-		-		-		-	0.000	0.700	0.700
Secure Configuration Management Ops Assessment	C/FFP	Cyber Security research and Solutions Corp : Ft Meade	0.964	-		-		-		-		-	0.000	0.964	0.964
Product Development 11	C/CPFF	Johns Hopkins University Applied Physics : Laurel, MD	0.000	0.450	Oct 2016	0.350	Oct 2017	0.363	Oct 2018	-		0.363	Continuing	Continuing	Continuing
Engineering Technical Services	MIPR	Axom Technologies : Fort Meade	0.000	0.502	Oct 2016	0.478	Oct 2017	0.485	Oct 2018	-		0.485	Continuing	Continuing	Continuing
Requirements Analysis/ Program Management: Civilian Pay	MIPR	Various : Various	-	1.445	Oct 2016	0.092	Oct 2017	0.249	Oct 2018	-		0.249	Continuing	Continuing	Continuing
Cloud Hosted Shared Services	C/FFP	Nisga's Data Systems LLC : Herndon, VA	1.350	-		-		-		-		-	0.000	1.350	1.350
Cloud/ Gateway Pilot	C/FFP	Alvarez and Associates : Tysons Corner, VA	0.304	-		-		-		-		-	0.000	0.304	0.304
Cloud/ Gateway Pilot	C/FFP	BY Light Professional IT Services : : Arlington, VA	0.413	-		-		-		-		-	0.000	0.413	0.413
Subtotal			82.286	7.885		9.251		4.783		-		4.783	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	SS/CPFF	Comptel : Arlington, VA	2.072	-		-		-		-		-	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Horizontal Engineering</i>	
Horizontal Engineering	
<i>Modeling and Simulation Applications</i>	
Modeling and Simulation Applications	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Horizontal Engineering</i>				
Horizontal Engineering	1	2017	4	2023
<i>Modeling and Simulation Applications</i>				
Modeling and Simulation Applications	1	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration				Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T62: DoD Information Network (DoDIN) Systems Engineering and Support	42.797	10.542	12.313	11.778	-	11.778	11.323	11.628	11.785	12.048	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD Information Network (DODIN) Systems Engineering and Support project aligns with the updated DISA Strategic Plan, which includes the Chief Technology Officer's Outlook and a Technology Watchlist. The Watchlist identifies key technology areas that are essential for Defense Information Systems Agency (DISA) including: Process/Automation, Cloud, Cyber Security, End-User Devices, and Communication (DoDIN, Mobile/End-User Devices).

The DODIN Systems Engineering and Support Project ensure the technical strategies for the Defense Information Systems Agency (DISA) are in line with the DoD IT Efficiency strategy and the latest Department of Defense Chief Information Office (DoD CIO) Capabilities Planning Guidance (CPG) through the Office of the Chief Technology Officer (OCTO). These strategies will establish the foundation for DISA's technology investments and technical development. The OCTO leverages emerging technology to drive efficiencies and cost savings to the DoD, the Warfighter, and other Federal Agencies, and provides actionable, decision-oriented information to the Secretary of Defense, Joint Staff, Military Services, Combatant Commands, and other mission partners in satisfying DoD mission objectives. Cyber security and cloud computing present critical near term challenges, especially the ability to securely leverage commercial cloud service offerings. The OCTO's partnership with Defense Advanced Research Projects Agency (DARPA) will assess and transition technologically relevant and mature solutions. Included are applications with a security wrapper that detect and mitigate cyberattacks; smart routing and managed reputation capability; embedded system defense capabilities; and resilient and intrusion-tolerant network capabilities.

Partnerships with industry, academia, and the Federal sectors will produce requisite cyber measures and ensure optimal use of commercial cloud services. The OCTO will conduct technology assessments, process improvements, as well as the analysis and review of potential technology solutions, products, capabilities and services to ensure consistency with DODIN architecture and standards. Enabled by the Technology Assessment Framework (TAF) and the DISA Technology Information Repository (DTIR), the OCTO will perform "quick looks" and deeper technology evaluations to provide critical awareness, characterization, and suitability of specific technologies. These include the assessments of advanced cloud management capabilities; physical containers to enable mobile data center; emerging open source Storage Service APIs and/or abstractions and global standards for storage services; analytic platform performance baselines of emerging commercial analytic platform products; advanced approaches to Continuity of Operations (COOP) in a hybrid cloud environment; and the next generation software defined networks for automating and virtualizing the DODIN.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: Department of Defense Information Network (DODIN) Systems Engineering and Support	FY 2017	FY 2018	FY 2019
	10.542	12.313	11.778
FY 2018 Plans: The CTO will expand its focus on laboratory prototyping known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)

reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler to leverage capabilities from five principal areas. These five areas are; Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DoDIN, Mobile/End-User Devices). CTO will conduct technical assessments for future cloud computing technologies and innovative service delivery models, mobile devices, application development and vetting best practices, and next generation virtualized Software Defined Networks (SDN) for automating and virtualizing the DODIN. CTO will partner with commercial partners, academia, technical analysis centers, as well as organizations within the Intelligence Community, to bring state of the art capabilities to the DISA/DoD resulting in better communications and monitoring tools, enterprise services and improved end-user services and capabilities. CTO will continue to pursue and refine methods, processes and strategies to assist in the acceleration of capability into the operational environment.

There is a increase of +\$1.771 from FY 2017 to FY 2018. Funding will be used to morph to an internet 2.0 environment where DoD, other government organizations, coalition members, first responders, private industry, academia and commercial vendors will be able to share secured data and information in such a way that adversaries can be identified, found, brought to Justice before inflicting harm on innocent citizens and allies anywhere in the world. CTO will aggressively pursue next generation technologies to feed the internet 2.0 environment. These technologies will be leveraged through the expansion of a CTO futuristic Skunk Works effort known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler for the internet 2.0 environment. This increase is partially offset by a decrease of -\$0.276 is attributed to the Service Requirements Review Board (SSRB) contract reduction.

FY 2019 Plans:

The CTO will expand its focus on laboratory prototyping known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler to leverage capabilities from five principal areas. These five areas are; Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DoDIN, Mobile/End-User Devices). CTO will conduct technical assessments for future cloud computing technologies and innovative service delivery models, mobile devices, application development and vetting best practices, and next generation virtualized Software Defined Networks (SDN) for automating and virtualizing the DODIN. CTO will partner with commercial partners, academia, technical analysis centers, as well as organizations within the Intelligence Community, to bring state of the art capabilities to the DISA/DoD resulting in better communications and monitoring tools, enterprise services and improved end-user services and capabilities. CTO will continue to pursue and refine methods, processes and strategies to assist in the acceleration of capability into the operational environment.

FY 2018 to FY 2019 Increase/Decrease Statement:

FY 2017	FY 2018	FY 2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
A decrease of -\$0.535 from FY 2018 to FY 2019 is due to a cost savings in conducting technical system engineering reviews and oversight of DISA and DoD enterprise products and services efficiencies realized from the maturation of the Software Defined Environment (SDE) program.			
Accomplishments/Planned Programs Subtotals	10.542	12.313	11.778

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• O&M, DW/PE 0302019K: <i>Operation & Maintenance, Defense-Wide</i>	2.607	2.773	2.814	-	2.814	2.899	2.962	3.035	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Market research during the acquisition process includes a review of DISA contracts, other DoD contract vehicles, and other Federal Government agency contracts which are advertised for Government-wide usage. This market research also includes consideration of small businesses including minority/women owned (8A) businesses, Historically Black Colleges and Universities, mentor/protégé and other specialized contract vehicles and processes. Market research evaluates all contractors available from DISA sources for their ability to deliver the products specifically required for the unique program efforts. The program works collaboratively with vendors to obtain generic cost data for planning and analysis purposes. Past and current contract prices for similar work and other government-wide agency contracts provide additional sources of information. Quotes from multiple sources help provide averages for more realistic cost estimates. DISA makes a concerted effort to award many of its contracts to small businesses. Additionally, many of the DISA contracts are awarded with multiple option periods. These have the benefit of fixing labor costs over an extended period and minimizing the administrative costs associated with re-issuing short-term contracts.

E. Performance Metrics

Number of Technology Assessments

Performance is measured by the number of technologies assessed and the technologies transitioned or presented to DISA decision-making bodies such as the Service Portfolio Council (SPC) for acquisition decisions. The assessments identify, promote, channel and align technology research and investments. The objectives are to satisfy warfighter requirements by addressing capability gaps, to improve operational effectiveness and efficiency, and to reduce the time needed to field emerging technologies.

Measure/Goal: Number of technology assessments instantiated within the CTO Technology Environment. Number of research initiatives designed, developed, demonstrated, and transitioned or presented to DISA decision-making bodies such as the SPC for acquisition decisions.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
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FY 2017 Target: 8 Assessed and 5 transitioned / Actual: 8 Assessed and 5 transitioned FY 2018 Target: 12 Assessed and 8 transitioned FY 2019 Target: 12 Assessed and 8 transitioned		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration	Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering and Technical Services	FFRDC	MITRE : McLean, VA	9.111	2.299	Oct 2016	1.500	Oct 2017	1.323	Oct 2018	-		1.323	Continuing	Continuing	Continuing
Industry Tech Res	C/FFP	Gartner : Various	0.249	-		-		-		-		-	0.000	0.249	0.249
GIG Technical Insertion Engineering	C/FFP	SRA, Inc. : Fairfax, VA	1.211	-		-		-		-		-	0.000	1.211	1.211
Product Development	C/Various	Raytheon : Various	1.601	-		-		-		-		-	0.000	1.601	1.601
DAMA-C	MIPR	Defense Micro-electronics Activity : Various	11.794	-		-		-		-		-	0.000	11.794	11.794
Thin Engineering Support	MIPR	MIT Lincoln Labs : Lexington, MA	4.260	-		-		-		-		-	0.000	4.260	4.260
Engineering and Technical Support	C/FFP	Moya Technologies, Inc. : TBD	1.212	-		-		-		-		-	0.000	1.212	1.212
Engineering Technical Services	MIPR	TBD : TBD	3.315	-		-		1.084	Jul 2019	-		1.084	Continuing	Continuing	Continuing
Product Development	C/FFP	Science and Technology Associates, Inc : Arlington, VA	1.551	0.540	Jul 2017	-		-		-		-	0.000	2.091	2.091
Product Development	MIPR	SPAWAR : Charleston, SC	0.376	-		-		-		-		-	0.000	0.376	0.376
Product Development	MIPR	NSA : Ft. Meade, MD	0.691	-		-		-		-		-	0.000	0.691	0.691
Engineering Technical Services	C/FFP	TWM : Falls Church, VA	0.202	-		-		-		-		-	0.000	0.202	0.202
Product Development	C/FFP	SOLERS : Arlington, VA	0.995	1.378	Jul 2017	0.650	Jul 2018	-		-		-	Continuing	Continuing	Continuing
Product Development	C/FFP	Booz Allen Hamilton : McLean, VA	0.500	-		0.562	Jan 2018	-		-		-	Continuing	Continuing	Continuing
Product Development	MIPR	JITC : Ft. Meade, MD	0.351	-		-		-		-		-	0.000	0.351	0.351

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency												Date: February 2018			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 7				PE 0302019K / Defense Info. Infrastructure Engineering and Integration				T62 / DoD Information Network (DoDIN) Systems Engineering and Support							
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	MIPR	Various : Ft. Meade, MD	3.171	0.782	Oct 2016	1.528	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/Various	IV2: IT Consulting Services, LLC : Jackson, WY	1.674	-		-		-		-		-	0.000	1.674	1.674
Engineering Technical Services	C/FFP	Information Assurance TWM Follow On : TBD	0.533	0.208	Oct 2016	-		-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/CPFF	TIE NEMS: B&D Consulting : TBD	-	0.564	Oct 2016	-		-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/Various	Tapestry Technologies, INC : TBD	-	1.637	Mar 2017	2.536	Mar 2018	-		-		-	Continuing	Continuing	Continuing
Management Services - Civilian Pay	Various	Various : Ft. Meade	-	3.134	Oct 2016	4.957	Oct 2017	-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/FFP	PMPC-Itility LLC : Ft. Meade, MD	-	-		0.580	Mar 2018	0.227	Mar 2019	-		0.227	Continuing	Continuing	Continuing
Information Assurance	C/CPFF	TBD : TBD	-	-		-		0.583	Jan 2019	-		0.583	Continuing	Continuing	Continuing
Sys Engineering	C/CPFF	TBD : TBD	-	-		-		3.650	Mar 2019	-		3.650	Continuing	Continuing	Continuing
Management Services - Civilian Pay	C/CPFF	Varies : TBD	-	-		-		4.911	Oct 2018	-		4.911	Continuing	Continuing	Continuing
Subtotal			42.797	10.542		12.313		11.778		-		11.778	Continuing	Continuing	N/A
Project Cost Totals			42.797	10.542		12.313		11.778		-		11.778	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Technical Direction Agent (TDA)	
Technical Direction Agent (TDA)	
Engineering Support	
Engineering Support	
Industry/University Technical Research	
Industry/University Technical Research	
Technology Assessments	
Technology Assessments	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Technical Direction Agent (TDA)				
Technical Direction Agent (TDA)	1	2017	4	2023
Engineering Support				
Engineering Support	1	2017	4	2023
Industry/University Technical Research				
Industry/University Technical Research	1	2017	4	2023
Technology Assessments				
Technology Assessments	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications - DCS</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	255.636	14.861	15.428	14.769	-	14.769	14.174	15.014	14.819	15.110	Continuing	Continuing
PC01: <i>Presidential and National Voice Conferencing/</i>	93.693	2.865	3.195	3.137	-	3.137	3.008	3.123	3.138	3.187	Continuing	Continuing
T82: <i>DISN Systems Engineering Support</i>	161.943	11.996	12.233	11.632	-	11.632	11.166	11.891	11.681	11.923	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Systems Network (DISN) is the Department of Defense's (DoD's) consolidated worldwide telecommunications capability that provides secure, end-to-end information transport for DoD operations. It also provides the warfighter and the Combatant Commands (COCOMs) with a robust Command, Control, Communications, Computing, and Intelligence infrastructure to support DoD net-centric missions and business requirements. The Defense Red Switch Network (DRSN) is a DoD Secure Voice, Command and Control Network that is controlled and directed by the Joint Staff and the Office of the Secretary of Defense. It provides multi-level secure, rapid, ad hoc, voice calling and conferencing capability to the President, Secretary of Defense, Services, COCOMs, subordinate organizations (military and civilian) and coalition allies. DRSN also supports the Presidential and National Voice Conferencing (PNVC) (formerly known as National Emergency Action Decision Network (NEADN)) and the Enhanced Pentagon Capability/Survivable Emergency Conferencing Network. These funds support three major efforts:

DISN Systems Engineering Support: This effort includes engineering for Networking capabilities and optical transport capabilities to ensure the essential operations of a robust and secure DISN; refreshing the systems that instrument and automate the operations, administration, maintenance and provisioning functions and creating a single DISN-wide view for network managers and operators.

PNVC: The PNVC provides selected system engineering for continued development and testing of the PNVC equipment for senior leaders. The PNVC system provides a military, satellite-based, survivable, secure, and near toll-quality voice conferencing capability for the President, Secretary of Defense, Chairman, Joint Chiefs of Staff, and other senior national/military leaders anywhere in the world as needed. Funding supports the acquisition activities for the PNVC baseband equipment, including critical and essential engineering required to develop new vocoder and cryptographic and audio-summing equipment.

DoD Mobility: The Mobility Program will lead the development of an Enterprise Solution to support Controlled Unclassified Information (CUI) and leverage commercial carrier infrastructure to provide entry points for both classified and unclassified wireless capabilities. Continued evolution and expansion, within the Department, of the DoD Mobility program will allow for increased mobile services in direct support of the warfighter and the COCOMs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications - DCS</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	13.994	15.428	15.002	-	15.002
Current President's Budget	14.861	15.428	14.769	-	14.769
Total Adjustments	0.867	0.000	-0.233	-	-0.233
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	0.867	-	-0.233	-	-0.233

Change Summary Explanation

The increase of +\$0.867 in FY 2017 is attributed to increase in systems engineering and development for assured identity capability.

The decrease of \$-0.233 in FY 2019 in reduced frequency for Cybersecurity/IA changes in PNVC Software, and reduced testing support Software Defined Networking, and fewer DRSN HW/SW Component Enhancements.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS			Project (Number/Name) PC01 / Presidential and National Voice Conferencing/				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
PC01: <i>Presidential and National Voice Conferencing/</i>	93.693	2.865	3.195	3.137	-	3.137	3.008	3.123	3.138	3.187	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Presidential and National Voice Conferencing (PNVC) (formerly called National Emergency Action Decision Network (NEADN)) provides system engineering, development and testing of the equipment for senior leaders. The PNVC system provides a military satellite-based, world-wide, survivable, secure, and near toll-quality voice conferencing capability for the President, Secretary of Defense, Chairman, Joint Chiefs of Staff, and other senior national/military leaders. By implementing new technology capabilities (e.g. Ethernet-Framing and higher data rate), this project provides improved performance to the survivable voice conferencing capability. This project supports the acquisition activities for the PNVC baseband equipment, including engineering required to develop new vocoder, cryptographic and audio-summing equipment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Presidential and National Voice Conferencing (PNVC)	2.865	3.195	3.137
Description: Presidential and National Voice Conferencing (PNVC) Systems Engineering conduct analyses for continuity of NEADN voice conferencing for national/military leaders through PNVC deployment. Program continues engineering, technical analysis, development, and coordination to ensure terminal, baseband, and satellite synchronization for voice conferencing amongst senior leaders.			
FY 2018 Plans: Continue to support PNVC integration and testing and fielding of expanded capability and upgrades at PNVC sites. This includes systems engineering and testing support to the various platforms receiving the capability. Fund Engineering change proposals for software as needed to respond to user feedback.			
The increase of +\$0.330 from FY 2017 to FY 2018 is attributed to increased requirements for engineering support during system testing and changes to software.			
FY 2019 Plans: Continue to support PNVC integration and testing and fielding of expanded capability and upgrades at PNVC sites. This includes systems engineering and testing support to the various platforms receiving the capability. Fund Engineering change proposals for software as needed to respond to user feedback.			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) PC01 / <i>Presidential and National Voice Conferencing/</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
The decrease of -\$0.058 from FY 2018 to FY 2019 is attributed to the reduction in the number of engineering changes implemented for fielded capabilities.			
Accomplishments/Planned Programs Subtotals	2.865	3.195	3.137

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• Procurement, DW/PE 0303126K: <i>Procurement, Defense-Wide</i>	1.119	1.261	1.386	-	1.386	1.515	1.546	1.577	1.578	Continuing	Continuing

Remarks
N/A

D. Acquisition Strategy
The audio equipment development activities are incorporated into the sole source DRSN sustainment contract. For the development of the BIG cryptographic device, NSA will perform an assisted acquisition for DISA using a competitively awarded fixed price contract. Engineering support for PNVC is provided by task orders competitively awarded on existing DoD contracts and Federally Funded Research and Development Contracts (FFRDC) support.

E. Performance Metrics
PNVC project metrics track the development status of program acquisition documents, as required by the component executive. These documents include: Project Execution Plan, Concept of Operations Acquisition Strategy, Capability Production Document, System Engineering Plan and other documents required by the DISA's Component Acquisition Executive. Additionally, for management and system engineering support vendors, monthly reports are critical to tracking overall programmatic and engineering progress and the percent of total deliverables received on time.

For product development activities, effective progress is measured based upon the task order milestones in the form of development reviews and weekly progress meetings. As end items (hardware and software) become available for test, additional measures will be available. Specifically, the percentage of successfully verified requirements out of the number tested and the number of critical trouble reports outstanding longer than six months, will be tracked.

Performance Metrics:

Project Support Deliverables received on time

FY17 (expected result): 100% / (Actual): 100%
FY18 (expected result): 100%

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) PC01 / <i>Presidential and National Voice Conferencing/</i>
FY19 (expected result): 100%		
Product Deliverable Milestones completed on time		
FY17 (expected result): 80% / (Actual): 80%		
FY18 (expected result): 100%		
FY19 (expected result): 100%		
Successfully Tested Requirements:		
FY17 (expected result): 95% / (Actual): 95%		
FY18 (expected result): 95%		
FY19 (expected result): 95%		
Critical Trouble Reports > 6 months old		
FY17 (expected result): ≤ 4 / (Actual): 1		
FY18 (expected result): ≤ 4		
FY19 (expected result): ≤ 4		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) PC01 / Presidential and National Voice Conferencing/
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
BIG Development Preparation	MIPR	NSA : Various	36.206	-		-		-		-		-	Continuing	Continuing	-
MSD-III Development	C/T&M	Raytheon : Largo, FL	18.479	-		-		-		-		-	Continuing	Continuing	-
PNVC Baseband Equipment	TBD	Various : Various	9.300	-		-		-		-		-	Continuing	Continuing	-
Systems Engineering	FFRDC	MITRE : McLean, VA	0.423	-		-		-		-		-	Continuing	Continuing	-
PNVC Baseband Airborne variant ECP	C/CPFF	Raytheon : Largo, FL	16.880	-		-		-		-		-	Continuing	Continuing	-
System Engineering	C/CPFF	Booz Allen Hamilton : McLean, VA	-	-		-		-		-		-	Continuing	Continuing	-
Subtotal			81.288	-		-		-		-		-	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PNVC Software enhancements	C/CPFF	Raytheon : Florida	1.200	0.799	Aug 2017	1.900	Dec 2017	0.785	Feb 2019	-		0.785	Continuing	Continuing	-
PNVC Software enhancements	C/CPFF	General Dynamics : NSA	2.500	0.389	Jun 2017	-		0.652	Feb 2019	-		0.652	Continuing	Continuing	-
Systems Engineering	C/CPFF	Booz Allen Hamilton : McLean, VA	3.000	1.015	Mar 2017	0.815	Mar 2018	0.900	Mar 2019	-		0.900	Continuing	Continuing	-
Systems Engineering	FFRDC	Aerospace Corporation : Falls Church, VA	0.800	0.200	Mar 2017	0.250	Oct 2017	0.350	Oct 2018	-		0.350	Continuing	Continuing	-
Systems Engineering	FFRDC	Mitre : McLean, VA	0.800	0.150	Oct 2016	0.180	Oct 2017	0.450	Oct 2018	-		0.450	Continuing	Continuing	-
Test and Evaluation	TBD	605th : TES	0.500	0.040	Oct 2016	0.050	Oct 2017	-		-		-	Continuing	Continuing	-
Test and Evaluation	TBD	Miscel : ---	0.580	0.272	Oct 2016	-		-		-		-	Continuing	Continuing	-
Subtotal			9.380	2.865		3.195		3.137		-		3.137	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency													Date: February 2018		
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
0400 / 7				PE 0303126K / Long-Haul Communications - DCS					PC01 / Presidential and National Voice Conferencing/						
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Certification Testing	MIPR	Various : Various	3.025	-		-		-		-		-	Continuing	Continuing	-
Subtotal			3.025	-		-		-		-		-	Continuing	Continuing	N/A
Project Cost Totals			93.693	2.865		3.195		3.137		-		3.137	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) PC01 / <i>Presidential and National Voice Conferencing/</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>PNVC System Testing</i>																												
PNVC System																												
<i>N/A</i>																												
PNVC System Engineering and Management Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) PC01 / <i>Presidential and National Voice Conferencing/</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>PNVC System Testing</i>				
PNVC System	1	2017	4	2023
<i>N/A</i>				
PNVC System Engineering and Management Support	1	2017	2	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T82: DISN Systems Engineering Support	161.943	11.996	12.233	11.632	-	11.632	11.166	11.891	11.681	11.923	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DISN Systems Engineering Support project encompasses four activities:

Next Generation Networking Technologies (formally known as Internet Protocol (IP) and Optical Transport Technology Refresh): Provides engineering technical expertise to support and integrate newer, more efficient technologies required to replace end of lifecycle equipment and to achieve more efficient Networking technologies. These new technologies provide protected and assured services for critical support to the warfighter as well as other DoD and federal customers.

Element Management System (EMS): Provides operational and network operating systems that instrument and automate the operations, administration, maintenance and provisioning functions creating a single DISN-wide view for network managers and operators. EMS is a component of the DISN Operational Support Systems (OSS).

Peripheral and Component Design (Secure Voice Switches): This equipment satisfies unique military requirements for multi-level security (i.e., extensive conferencing/conference management capabilities and features, and gateway functions) that are not available in commercial products.

DoD Mobility: The Mobility Program will lead the development of an Enterprise Solution to support Controlled Unclassified Information (CUI) and leverage commercial carrier infrastructure to provide entry points for both classified and unclassified wireless capabilities. Continued evolution and expansion, within the Department, of the DoD Mobility program will allow for increased mobile services in direct support of the warfighter and the COCOMs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Next Generation Networking Technologies (formally known as Internet Protocol (IP) and Optical Transport Technology Refresh.	4.236	5.400	5.226
Description: Provides engineering technical expertise to support and integrate newer, more efficient technologies required to replace end of lifecycle equipment and to achieve more efficient Networking technologies. These new technologies provide protected and assured services for critical support to the warfighter as well as other DoD and federal customers.			
FY 2018 Plans: The DISN will continue to perform Research, Test and Evaluation activities in Software Environment, Next Generational Networking to include Gray networks and all associated encryption technologies.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>The increase +\$1.164 from FY 2017 to FY 2018 will support additional test and evaluation of networking components for efforts such as Automated Provisioning and Software Defined Networking for IP and Optical components.</p> <p>FY 2019 Plans: The DISN will continue to perform Research, Test and Evaluation activities in Software Environment, Next Generational Networking to include Gray networks and all associated encryption technologies.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease of -\$0.174 is due to a slightly reduced effort on Software Defined networking.</p>			
<p>Title: DISN OSS</p> <p>FY 2018 Plans: The decrease of -\$0.764 from FY 2017 to FY 2018 is due to the reduction in web services development requirements for operational and network operating systems within the DISN OSS.</p> <p>FY 2019 Plans: N/A</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: N/A</p>	0.764	0.000	0.000
<p>Title: Peripheral and Component Design</p> <p>Description: This equipment satisfies unique military requirements for multi-level security (i.e., extensive conferencing/conference management capabilities and features, and gateway functions) that are not available in commercial products.</p> <p>FY 2018 Plans: Support upgrades to switch software for IA/Cybersecurity improvements and continued integration of IP trunking and IP line-side and gateway functions in evolving system to meet RMF and NC3 requirements.</p> <p>The decrease of -\$0.152 from FY 2017 to FY 2018 reflects a decrease in the amount of software development and testing efforts required in FY 2018.</p> <p>FY 2019 Plans: Support upgrades to switch software for IA/Cybersecurity improvements and continued integration of IP trunking and IP line-side and gateway functions in evolving system to meet RMF and NC3 requirements.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>	2.565	2.413	1.781

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
The decrease of \$-0.632 from FY 2018 to FY 2019 is attributed to fewer DRSN HW/SW component enhancements.			
Title: Mobility	4.431	4.420	4.625
Description: DoD Mobility: The Mobility Program will lead the development of an Enterprise Solution to support Controlled Unclassified Information (CUI) and leverage commercial carrier infrastructure to provide entry points for both classified and unclassified wireless capabilities. Continued evolution and expansion, within the Department, of the DoD Mobility program will allow for increased mobile services in direct support of the warfighter and the COCOMs.			
FY 2018 Plans: DoD Mobility will continue to evaluate and test the centralized mobility management components for the top secret capabilities as well as newly deployed mobile device hardware, software, middleware that will be integrated into the existing infrastructure. T&E of next generation prototype devices, assured interoperability and application integration for new commercial mobile devices will continue through the FYDP.			
The decrease of -\$0.011 from FY 2017 to FY 2018 is due to decreased testing and integration of the DMCC-S proxy server.			
FY 2019 Plans: Developmental and production testing of new-model commercial mobile devices per product baseline, carrier, and platform authenticated against the Mobile Device Manager. Security, interoperability, and functional evaluation of mobile applications. Production testing of the applications development framework and integration testing for infrastructure components, including additional gateway instances supporting secret and top secret domains as well as any COTS component technology refresh requirements against the end-to-end architecture.			
FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$0.205 from FY 2018 to FY 2019 is the result of increases in the mobility communications application development.			
Accomplishments/Planned Programs Subtotals	11.996	12.233	11.632

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M/PE0303126K: <i>Operation & Maintenance, Defense-Wide</i>	35.685	39.040	37.426	-	37.426	37.522	38.259	-	-	Continuing	Continuing
• Procurement/PE0303126K: <i>Procurement, Defense-Wide</i>	99.928	115.194	116.958	-	116.958	117.993	117.993	-	-	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

Products acquired for EMS requirements are professional services, network management software, supporting hardware, and development tools. Professional services will be procured through existing contracts available to DISA. The DISA Computing Services will be used for hardware and software leased managed services, as well as the NASA enterprise equipment contracting vehicle when necessary and applicable.

The Internet Protocol (IP) enabling of the DRSN DSS-2A switch, Secure voice conference management improvements, HEMP Phone and related DRSN components will use an existing Air Force Command and Control Switching Systems (CCSS) Depot Support contract with the Secure Voice Switch systems manufacturer (Raytheon) to perform the development and modification work, system integration and testing support.

The Mobility initiative supports systems engineering and development of a DoD Mobility solution. The focus is on acquisitions to support the program across the DoD to include scheduling, delivery approach, and risk management. This also includes the vision and phased approach to unified capabilities for classified and unclassified wireless capabilities to meet DoD needs.

Products acquired for EMS requirements are professional services, network management software, supporting hardware, and development tools. Professional services will be procured through existing contracts available to DISA. The DISA Computing Services will be used for hardware and software leased managed services, as well as the NASA enterprise equipment contracting vehicle when necessary and applicable.

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The Mobility initiative supports systems engineering and development of a DoD Mobility solution. The focus is on acquisitions to support the program across the DoD to include scheduling, delivery approach, and risk management. This also includes the vision and phased approach to unified capabilities for classified and unclassified wireless capabilities to meet DoD needs.

E. Performance Metrics

Funds support tech insertion and deployment of two DMCC gateways which will include Top Secret (TS) and Secret capabilities in the remaining CONUS and OCONUS areas requiring gateways to ensure adequate load balancing of mobile device usage on the DoD Mobility Architecture. Will also support evaluation of tech insertion of classified and unclassified data at multiple sites both CONUS and OCONUS. DoD Mobility will evaluate and test the centralized mobility management components for the classified components. Funds will provide support for test and evaluation (T&E) of centralization of the mobile device hardware, software, middleware, and MDM associated capabilities integration efforts. Will provide for T&E of DoD Mobility NIPRNet & SIPRNet Suite insertion efforts to include mobile VPN and authentication,

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) T82 / <i>DISN Systems Engineering Support</i>
<p>mobile devices, and mobile applications. Will provide for T&E of mobile devices including prototypes for next generation classified devices and additional commercial mobile devices to test their interoperability across the enterprise. Additionally, funds will support T&E of mobile applications to ensure mobile applications are verified and validated prior to hosting on the MAS. Will support testing of commercial mobile devices and certification and accreditation approval. Funds will support quarterly testing and evaluation of various Mobile Initiatives; follow up testing against the Mobile Device Management (MDM); verification and validation testing of devices used against the MDM; and requirements testing to ensure Mobility's requirements have been met. DoD Mobility will continue to evolve detailed Implementation Plans, Concept of Operations and Standard Operating Procedures for DMCC Capabilities.</p> <p>FY 2017 (Estimated): 100% successful developmental and production testing of commercial mobile devices per product baseline, carrier, and platform authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of 85% of mobile applications. 100% successful production testing of the applications development framework and integration testing for infrastructure components.</p> <p>FY 2017 (Met): 100% successfully conducted developmental and production testing of commercial mobile devices per product baseline, carrier, and platform authenticated against the Mobile Device Manager. Successfully conducted security, interoperability, and functional evaluation of 85% of mobile applications. 100% successful conducted production testing of the applications development framework and integration testing for infrastructure components.</p> <p>FY 2018 (Estimated): 100% successful developmental and production testing of new-model commercial mobile devices per product baseline, per carrier, per platform authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of at least of 85% of mobile applications requested to be approved and available in the hosted Mobile Application Store. 100% successful production testing of the applications development framework and integration testing for infrastructure components, including additional gateway instances supporting secret and top secret domains as well as any COTS component technology refresh requirements against the end-to-end architecture.</p> <p>FY 2019 (Estimated): 100% successful developmental and production testing of new-model commercial mobile devices per product baseline, per carrier, per platform authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of at least of 85% of mobile applications requested to be approved and available in the hosted Mobile Application Store. 100% successful production testing of the applications development framework and integration testing for infrastructure components, including additional gateway instances supporting secret and top secret domains as well as any COTS component technology refresh requirements against the end-to-end architecture.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency											Date: February 2018				
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS					Project (Number/Name) T82 / DISN Systems Engineering Support				

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering for DSRN Components & Peripherals	Various	Raytheon : Florida	11.229	2.565	Feb 2017	0.983	Mar 2018	1.781	Mar 2019	-		1.781	Continuing	Continuing	Continuing
Systems Engineering for IP Enabling DSS-2A Secure Voice Switch	C/T&M	Raytheon : Florida	21.440	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering & Technical Services for Information Sharing Services for Voice	C/T&M	SAIC : VA	2.774	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering & Technical Services for Network Mgmt Solutions for New DISN Element Technologies	C/T&M	Various : VA	2.026	-		-		-		-		-	Continuing	Continuing	Continuing
Single Sign On	C/T&M	SAIC : Various	1.397	-		-		-		-		-	Continuing	Continuing	Continuing
System Engineering for VoSIP	C/T&M	Various : Various	1.218	-		-		-		-		-	Continuing	Continuing	Continuing
Space Vehicle Upload	SS/CPFF	Iridium : McLean, VA	12.635	-		-		-		-		-	Continuing	Continuing	Continuing
Gateway Improvement	SS/CPFF	Iridium : McLean, VA	13.565	-		-		-		-		-	Continuing	Continuing	Continuing
Field Application Tool	MIPR	NSWC : Dahlgren	6.635	-		-		-		-		-	Continuing	Continuing	Continuing
DTCS Handset	SS/CPFF	Iridium : McLean, VA	5.850	-		-		-		-		-	Continuing	Continuing	Continuing
Command and Control Handset	SS/CPFF	Iridium : McLean, VA	7.275	-		-		-		-		-	Continuing	Continuing	Continuing
Alt. Supplier Development	MIPR	NSWC : Dahlgren, VA	3.450	-		-		-		-		-	Continuing	Continuing	Continuing
Radio Only Interface	MIPR	NSWC : Dahlgren, VA	2.525	-		-		-		-		-	Continuing	Continuing	Continuing
Remote Control Unit	SS/CPFF	Iridium : McLean, VA	2.100	-		-		-		-		-	Continuing	Continuing	Continuing
Type 1 Security	SS/CPFF	Iridium : McLean, VA	6.455	-		-		-		-		-	Continuing	Continuing	Continuing
Vehicle Integration	MIPR	NSWC : Dahlgren, VA	3.185	-		-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering for IP and Optical Technology Refresh	Various	DITCO : Various	8.717	-		-		-		-		-	Continuing	Continuing	-
Engineering & Technical Services for Web Based Mediation	C/T&M	Apptis : VA	1.168	-		-		-		-		-	-	-	-
System Engineering and Technical Services for ISOM	Various	DITCO : Various	2.915	-		-		-		-		-	-	-	-
Serialized Asset Management - OSS	C/T&M	SAIC : VA	0.822	-		-		-		-		-	-	-	-
Gateways - Mobility	TBD	TBD : TBD	7.107	-		-		-		-		-	-	-	-
Thin Client Solution - Mobility	TBD	TBD : TBD	2.154	-		-		-		-		-	-	-	-
New Field Communications	C/FFP	TBD : TBD	0.550	-		-		-		-		-	-	-	-
National Conference Management	MIPR	USAF : Ratheon	4.514	-		-		-		-		-	-	-	-
IP Enable DRSN	MIPR	USAF : Ratheon	1.562	-		1.408	Feb 2018	-		-		-	-	-	-
HEMP Phone Development	TBD	Raytheon : TBD	0.869	-		-		-		-		-	-	-	-
100G Optical	TBD	TBD : TBD	0.337	-		-		-		-		-	-	-	-
Defense Production Act III Optical Networking	TBD	TBD : TBD	2.666	-		-		-		-		-	Continuing	Continuing	-
DoD Mobility Capability Service Assurance	C/FFP	TBD : TBD	2.316	-		-		-		-		-	-	-	-
TBD	TBD	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
TBD	TBD	*** PERFORMING ACTIVITY *** : *** LOCATION ***	-	-		2.420	Feb 2018	-		-		-	Continuing	Continuing	-
System Engineering Support DMCC/DMUC	C/FFP	JHU-APL : NAVSEA	-	-		-		-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering Support DMCC/DMUC	C/FFP	BAH : TBD	-	-		2.000	Feb 2018	1.972	Feb 2019	-		1.972	Continuing	Continuing	-
DIUx-Mobility APP Vetting and MSM tools (MTD)	MIPR	TBD : TBD	-	-		-		1.470	Feb 2019	-		1.470	Continuing	Continuing	-
TBD	C/TBD	SPAWAR : TBD	-	-		-		0.897	Feb 2019	-		0.897	Continuing	Continuing	-
Subtotal			139.456	2.565		6.811		6.120		-		6.120	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IT Support - Mobility	C/FFP	Arieds, LLC : Ft. Meade	2.300	-		-		-		-		-	-	-	-
NS2 SE Support - Mobility	C/FFP	APPTIS : Ft. Meade	0.311	-		-		-		-		-	-	-	-
IT Support - Mobility	Various	TBD : TBD	3.000	-		-		-		-		-	-	-	-
Subtotal			5.611	-		-		-		-		-	-	-	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Certification Testing	Various	JITC : Various	6.649	1.593	Oct 2016	-		-		-		-	Continuing	Continuing	Continuing
Test & Evaluation Support - Mobility	Various	JITC : Ft. Meade	5.010	0.897	Oct 2016	-		0.286	Feb 2019	-		0.286	-	-	-
Integration, Test ann Modification - Mobility	Various	TBD : TBD	5.217	1.941	Nov 2016	-		-		-		-	-	-	-
Tech Refresh/Functionality Testing	MIPR	Multiple : Various	-	-		-		-		-		-	Continuing	Continuing	Continuing
Tech Refresh/Functionality Testing	MIPR	Naval Observatory : MA	-	-		-		-		-		-	-	-	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency											Date: February 2018		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support					

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OSS/Functionality-Configuration	MIPR	Multiple : Various	-	-		-		-		-		-	Continuing	Continuing	Continuing
DISN Tech Refresh	TBD	TBD : TBD	-	5.000	Jan 2017	-		5.226	Jan 2019	-		5.226	-	-	-
Various	TBD	TBD : TBD	-	-		5.422	Jan 2018	-		-		-	Continuing	Continuing	-
Subtotal			16.876	9.431		5.422		5.512		-		5.512	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			161.943	11.996		12.233		11.632		-		11.632	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DRSN																												
DRSN																												
OSS																												
OSS																												
Technology Refresh																												
Technology Refresh																												
Mobility																												
Lab Purchase (Gateways, NIPR, SIPR, TS Enclave)																												
DoD Mobility Gateways - Architecture Support																												
NIPR Enclave (MDM, MAS)																												
SIPR Enclave (MDM, MAS)																												
TS Enclave (MDM, MAS)																												
MDM & MAS Operational Testing																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DRSN				
DRSN	1	2017	4	2023
OSS				
OSS	1	2017	4	2017
Technology Refresh				
Technology Refresh	1	2017	4	2023
Mobility				
Lab Purchase (Gateways, NIPR, SIPR, TS Enclave)	1	2017	4	2023
DoD Mobility Gateways - Architecture Support	1	2017	4	2023
NIPR Enclave (MDM, MAS)	1	2017	4	2023
SIPR Enclave (MDM, MAS)	1	2017	4	2023
TS Enclave (MDM, MAS)	1	2017	4	2023
MDM & MAS Operational Testing	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	153.865	12.316	15.855	17.579	-	17.579	17.383	17.715	18.017	18.458	Continuing	Continuing
T64: <i>Special Projects</i>	70.985	0.000	5.481	5.481	-	5.481	5.558	5.564	5.562	5.673	Continuing	Continuing
T70: <i>Strategic C3 Support</i>	82.880	12.316	10.374	12.098	-	12.098	11.825	12.151	12.455	12.785	Continuing	Continuing

A. Mission Description and Budget Item Justification

Minimum Essential Emergency Communications Network (MEECN) provides the Nuclear Command, Control, and Communications (NC3) Engineer with plans and procedures, systems analysis, operational assessments, systems engineering, and development of concepts of operation and architectures. The NC3 System provides connectivity from the President and the Secretary of Defense through the National Military Command System to nuclear execution forces integral to fighting a “homeland-to-homeland,” as well as theater nuclear war. MEECN includes the Emergency Action Message dissemination systems and those systems used for integrated Tactical Warning/Attack Assessment, presidential decision-making conferencing, force report back, re-targeting, force management, and requests for permission to use nuclear weapons. Efforts assure positive control of nuclear forces and connectivity between the Secretary of Defense, military forces, and an informed decision-making linkage between the President, the Secretary of Defense, and the Combatant Commands. MEECN ensures our national leadership has proper command and control of our forces during times of national emergency, up to and including nuclear war.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	12.206	15.855	15.883	-	15.883
Current President's Budget	12.316	15.855	17.579	-	17.579
Total Adjustments	0.110	0.000	1.696	-	1.696
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	0.110	-	1.696	-	1.696

Change Summary Explanation

The increase of +\$1.696 in FY 2019 will fund Polo Hat theater and Paul Revere operational assessments of the National Leadership Command Capabilities (NLCC). Additional information is classified and provided under separate cover.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T64 / <i>Special Projects</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T64: <i>Special Projects</i>	70.985	0.000	5.481	5.481	-	5.481	5.558	5.564	5.562	5.673	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The mission is performing classified work. All aspects of this project are classified and require special access. Detailed information on this project is not contained in this document.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Special Projects	0.000	5.481	5.481
Description: Program is classified and exhibit will be provided under a separate cover.			
FY 2018 Plans: Program is classified and exhibit will be provided under a separate cover.			
FY 2019 Plans: Program is classified and exhibit will be provided under a separate cover.			
FY 2018 to FY 2019 Increase/Decrease Statement: Program is classified and exhibit will be provided under a separate cover.			
Accomplishments/Planned Programs Subtotals			5.481

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Program is classified and exhibit will be provided under a separate cover.

E. Performance Metrics

Program is classified and exhibit will be provided under a separate cover.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T64 / <i>Special Projects</i>
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Engineering & Intergration	C/CPFF	Verizon : Arlington, VA	70.985	0.000	Oct 2016	5.481	Oct 2017	5.481	Oct 2018	-		5.481	Continuing	Continuing	-
Subtotal			70.985	0.000		5.481		5.481		-		5.481	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		70.985	0.000	5.481	5.481	-	5.481	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T64 / <i>Special Projects</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Classified</i>	
Classified	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T64 / <i>Special Projects</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Classified				
Classified	1	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
T70: <i>Strategic C3 Support</i>	82.880	12.316	10.374	12.098	-	12.098	11.825	12.151	12.455	12.785	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the mission of the Nuclear Command, Control, and Communications (NC3) Systems Engineer to the Joint Staff and Executive Leadership. It also provides NC3 expertise to the Department of Defense (DoD) Chief Information Officer (CIO) National Leadership Command Capability (NLCC) Management Office. Systems Analysis supports long range planning and vulnerability assessments to ensure the NC3 System is adequate under all conditions of stress or war and recommends investment strategies to evolve the Nuclear Command and Control System to achieve desired capabilities. Operational Assessments of fielded systems and weapon platforms provide the sole means for verification of NC3 systems' performance in support of plans and procedures, operation orders, training, equipment, and end-to-end system configuration. Assessments provide strategic and theater level C3 interfaces into the NC3 System. Supporting efforts assure positive control of nuclear forces and connectivity between the Secretary of Defense and strategic and theater forces. Systems Engineering provides the Senior Leadership C3 System with technical and management advice, planning and engineering support, and Test & Evaluation. Leading Edge Command, Control, Communications, Computers, and Intelligence technology is assessed for all communication platforms supporting executive travelers and senior leaders to include the interoperability of hardware and operational procedures. These technology elements support the President's and other DoD command centers and aircraft (e.g., Air Force One and the National Airborne Operations Center).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Systems Engineering, Analysis and Architecture	12.316	10.374	12.098
FY 2018 Plans: Will continue oversight and configuration control of the NLCC functional baseline. Will continue to identify NLCC capability gaps, and develop engineering courses of action to close those gaps. Will continue to shape plans for future NLCC capabilities, perform end-to-end testing of fielded capabilities, and perform operational assessments of current capabilities to provide quantitative measures of ongoing system performance and operational efficiency. Will continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development.			
The decrease of +\$1.942 from FY 2017 to FY 2018 is due to reduced number of technical assessments required, expansion of the production of architectural artifacts required to complete the NLCC Technical Architecture; development of a NLCC Modeling and Simulation (M&S) capability; support engineering and implementation of the NLCC enterprise mobility infrastructure. Part of the overall increase (-\$0.297) is attributed to the Service Requirements Review Board (SSRB) contract reduction.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Will continue oversight and configuration control of the NLCC functional baseline. Will continue to identify NLCC capability gaps, and develop engineering courses of action to close those gaps. Will continue to shape plans for future NLCC capabilities, perform end-to-end testing of fielded capabilities, and perform operational assessments of current capabilities to provide quantitative measures of ongoing system performance and operational efficiency. Will continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase of +\$1.724 in FY 2019 will fund Polo Hat theater and Paul Revere operational assessments of the National Leadership Command Capabilities (NLCC). Additional information is classified and provided under separate cover.			
Accomplishments/Planned Programs Subtotals	12.316	10.374	12.098

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• O&M, PE 0303131K: O&M	20.337	26.029	24.630	-	24.630	25.114	25.627	26.093	26.742	Continuing	Continuing

Remarks

D. Acquisition Strategy

Full and open competition resulted in contract vehicles with Raytheon, Arlington, VA; Science Applications Int'l Corporation (SAIC), McLean, VA; and Pragmatics, Mclean, VA.

E. Performance Metrics

Performance is measured by compliance with contract deliverables schedules for specifically included products, such as: operational assessment plans, operational assessment reports; recommended revisions to the Joint Staff's Emergency Action Procedures (EAP-CJCS) Volumes VI and VII; updates to NC3 System Description documents and Nuclear C3 Architecture Diagrams. In addition, performance of the NC3 System is directly measured by the operational assessments funded by this program element. These periodic assessments evaluate the connectivity used for the five functions of Nuclear command and control: Situation Monitoring, Planning, Decision Making, Force Execution, and Force Management. Performance of the SLC3S-Airborne fleet is measured by the technical assessment results documented in the assessment reports. Assessment results are used by the Joint Staff and the DoD CIO to direct changes in system engineering and integration, programmatic execution, and training.

Specific performance metrics include the following:

Provide engineering products in all task areas that satisfy DoD/CIO and Joint Staff needs within allocated resources 90% of the time.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>

Conduct assessments of the NC3 system and the SLC3S that provide actionable results and recommendations for the Joint Staff and DoD/CIO to pursue improvements to these capabilities 90% of the time.

MEECN achieved all its FY 2017 performance metrics and is on track to achieve the FY 2018 and FY 2019 targets of provisioning the Joint Staff requirements within the allocated resources 90% of the time.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering 1	C/CPAF	SAIC : McLean, VA	20.060	1.639	Aug 2017	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering 2	C/CPAF	Raytheon Company : Arlington, VA	35.600	-		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering 3	C/CPFF	Pragmatics : McLean, VA	10.080	-		-		-		-		-	Continuing	Continuing	10.080
Systems Engineering 4	C/FP	Raytheon Company : Arlington, VA	9.311	9.736	Feb 2017	5.200	Feb 2018	6.050	Feb 2019	-		6.050	Continuing	Continuing	Continuing
Systems Engineering 5	C/CPFF	BAH : Falls Church, VA	4.273	-		-		-		-		-	Continuing	Continuing	4.273
Systems Engineering 6	C/CPFF	Harris Corporation : Melbourne, FL	2.500	-		-		-		-		-	Continuing	Continuing	2.500
Systems Engineering 7	C/CPAF	Carson Engineering : Bethesda, MD	1.056	-		-		-		-		-	Continuing	Continuing	Continuing
System Engineering 8	C/FFP	MITRE Corp : McLean, VA	-	0.941	Oct 2016	1.332	Oct 2017	1.000	Oct 2018	-		1.000	Continuing	Continuing	Continuing
System Engineering 9	C/FFP	JHU APL : Laurel, MD	-	-		2.500	Apr 2018	1.000	Apr 2019	-		1.000	Continuing	Continuing	-
System Engineering 10	C/FFP	TBD - New Contract : TBD	-	-		1.342	Aug 2018	-		-		-	Continuing	Continuing	-
System Engineering	C/CPFF	Jacob FNS : Arlington, Va	-	-		-		4.048	Oct 2018	-		4.048	Continuing	Continuing	-
Subtotal			82.880	12.316		10.374		12.098		-		12.098	Continuing	Continuing	N/A
Project Cost Totals			82.880	12.316		10.374		12.098		-		12.098	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NLCC Program Tracking Report (formally known as NC3 Program Tracking Report)																												
NLCC Program Tracking Report																												
Systems Analysis Documents																												
Systems Analysis Documents																												
NLCC Reference Architecture (formally known as NC3 Reference Architecture)																												
NLCC Reference Architecture																												
Operational Assessments																												
Operational Assessments																												
NLCC Portfolio Roadmap																												
NLCC Portfolio Roadmap																												
NLCC System Engineering and Integration																												
NLCC System Engineering and Integration																												
NLCC Target Architecture																												
NLCC Target Architecture																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NLCC Program Tracking Report (formally known as NC3 Program Tracking Report)				
NLCC Program Tracking Report	1	2017	3	2023
Systems Analysis Documents				
Systems Analysis Documents	1	2017	4	2023
NLCC Reference Architecture (formally known as NC3 Reference Architecture)				
NLCC Reference Architecture	1	2017	4	2023
Operational Assessments				
Operational Assessments	1	2017	4	2023
NLCC Portfolio Roadmap				
NLCC Portfolio Roadmap	1	2017	1	2023
NLCC System Engineering and Integration				
NLCC System Engineering and Integration	1	2017	1	2023
NLCC Target Architecture				
NLCC Target Architecture	4	2017	3	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	19.611	-	19.611	12.596	12.904	13.122	13.770	Continuing	Continuing
IA3: <i>Information Systems Security Program</i>	-	0.000	0.000	19.611	-	19.611	12.596	12.904	13.122	13.770	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Information Systems Security Program (ISSP) mission focuses on developing Department of Defense (DoD) enterprise solutions to Combatant Commands, Services, and Defense-wide agencies to ensure critical mission execution in the face of cyber attacks. The ISSP ensures that, the network, the computing centers, and core enterprise services will evolve to better support a joint cybersecurity/information assurance model that has common enterprise-scale perimeter defenses and will support a broad range of sharing policies from completely unclassified to tightly-held within a classified community. The ISSP will test and develop active-active defensive capabilities; test and integrate software defined networking and orchestration closed-loop security; perform research, development and engineering of emerging cyber situational awareness technologies; harden the network by providing architecture support, systems engineering and analytical functions for Endpoint and Perimeter defense capabilities; cyber IT infrastructure and automation support to deploy enterprise-wide next generation identity technologies; and develop and evolve an integrated cyber domain security workforce to be on the leading edge of defensive capabilities.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	4.500	-	4.500
Current President's Budget	0.000	0.000	19.611	-	19.611
Total Adjustments	0.000	0.000	15.111	-	15.111
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	15.111	-	15.111

Change Summary Explanation

The increase of +\$15.111 in FY 2019 is attributed to additional engineering and software expertise in support of the User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands; engineering and software expertise necessary to develop, test, and deploy the Automated Patch Management (APM) Proof of Concept and associated platform.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>				Project (Number/Name) IA3 / <i>Information Systems Security Program</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
IA3: <i>Information Systems Security Program</i>	-	0.000	0.000	19.611	-	19.611	12.596	12.904	13.122	13.770	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Information Systems Security Program (ISSP) mission focuses on developing Department of Defense (DoD) enterprise solutions to Combatant Commands, Services, and Defense-wide agencies to ensure critical mission execution in the face of cyber attacks. The ISSP ensures that, the network, the computing centers, and core enterprise services will evolve to better support a joint cybersecurity/information assurance model that has common enterprise-scale perimeter defenses and will support a broad range of sharing policies from completely unclassified to tightly-held within a classified community. The ISSP will test and develop active-active defensive capabilities; test and integrate software defined networking and orchestration closed-loop security; perform research, development and engineering of emerging cyber situational awareness technologies; harden the network by providing architecture support, systems engineering and analytical functions for Endpoint and Perimeter defense capabilities; cyber IT infrastructure and automation support to deploy enterprise-wide next generation identity technologies; and develop and evolve an integrated cyber domain security workforce to be on the leading edge of defensive capabilities.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Zero-Day Network Defense Email Capability</p> <p>Description: Zero-Day Network Defence (ZND) Email Capability Technology Assessment/Evaluation for Tech Refresh.</p> <p>FY 2019 Plans: Conduct Technology Assessment/Evaluation in support of Zero-Day Network Defense (ZND) Email Tech Refresh.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase +\$4.500 from FY 2018 for FY 2019 is for the technology evaluation in support of tech refresh of the Zero Day Net Defense (ZND) email capability on the Non-classified Internet Protocol Router Network (NIPRNet). This increase supports research and engineering solutions for enhanced malware analysis, preventative spear-phishing and perimeter attacks within the DoDIN, design of layered defenses against adversary Tactics, Techniques, and Procedures (TTPs) and testing of automated machine to machine processes of cyber situational awareness at the five email gateways.</p>	0.000	-	4.500
<p>Title: DoD Cyber Security Range (CSR)</p> <p>Description: The DoD Cyber Security Range (CSR) provides a multi-classification level, operationally realistic, DoDIN representative, cyber security environment to sustain and enhance the professional development of the DoD cyber security workforce.</p>	0.000	-	1.811

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p><i>FY 2019 Plans:</i> Continue providing the IA Range platform to test new Cybersecurity efforts using the CS Range; Increase capability to leverage CS Range for training and capstone events; Increase capability for remote access to CS Range for testing, training and exercises. Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements, JRSS Management System (JMS) Enhancements, and replicate the tactical network boundaries of the four services.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase of \$1.811 from FY 2018 to FY 2019 is due to the additional testing and simulation requirements for the operational networks within the Cybersecurity Range, including exploitation, evaluation of new capabilities, immersive training, tactics and techniques, procedures development and validation, system interoperability and integration testing, and certification and accreditation.</p>			
<p><i>Title:</i> Endpoint Security Solutions (ESS)</p> <p><i>Description:</i> Description: Endpoint Security Solutions (ESS) provides counters exploitation and destructive malware, contain exploited threats, and make indicators of attack/compromise visible to the operator; fully supports friendly forces operating in contested cyber environments. Provides Asset Inventory Management Modules (AIMM) to provide near-real time situational awareness of devices. Provides Digital Policy Management System (DPMS) to facilitate development and maintenance of Cybersecurity/Information Assurance Standards. Provides Assured Compliance Assessment Solution (ACAS) to assess the configuration compliance of networks and systems against DoD and all known vulnerabilities.</p> <p><i>FY 2019 Plans:</i> Provide software licensing necessary to perform the Automated Patch Management (APM) Proof of Concept, technical expertise necessary to deploy this APM solution, and additional infrastructure investment to provide an updated platform for the APM effort to be successful.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase of +\$3.000 from FY 2018 to FY 2019 is attributable to the additional requirements for software licensing to conduct the Automated Patch Management (APM) Proof of Concept.</p>	0.000	-	3.000
<p><i>Title:</i> Cyber HQs Support</p> <p><i>Description:</i> Preserves User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands.</p> <p><i>FY 2019 Plans:</i></p>	0.000	-	10.300

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Perform engineering and provide software licensing/maintenance in support of the User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase of +\$10.300 from FY 2018 for FY 2019 is attributable to additional engineering contract support and software licensing/maintenance support for the User Activity Monitoring (UAM) capability in countering insider threats at nine Combatant Commands.			
Accomplishments/Planned Programs Subtotals	0.000	-	19.611

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Conduct Technology Assessment/Evaluation in support of Zero-Day Network Defense (ZND) Email Tech Refresh. Performance objectives include 60% of Defense Enterprise Email (DEE) Mailboxes protected, 0% bypassed emails, and capability to handle up to 43% unique attachments to total threats detected.

Continue providing the IA Range platform to test new Cybersecurity efforts using the CS Range; Increase capability to leverage CS Range for training and capstone events; Increase capability for remote access to CS Range for testing, training and exercises. Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements, JRSS Management System (JMS) Enhancements, and replicate the tactical network boundaries of the four services. Annual objectives include 15 test and evaluation events, 9 training events, and support of 5 exercise events.

Provide engineering expertise and software licensing/maintenance in support of the User Activity Monitoring (UAM) capability in countering insider threats at nine CCMDs (USSOCOM, USAFRICOM, USCENTCOM, USEUCOM, USNORTHCOM, USPACOM, USSOUTHCOM, USSTRATCOM, and USTRANSCOM).

Acquire software licensing necessary to perform the Automated Patch Management (APM) Proof of Concept, technical expertise necessary to deploy this APM solution, and infrastructure investment to provide an updated platform for the APM effort to be successful.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Need this info from RMO office	C/CPFF	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Subtotal			-	-		-		-		-		-	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ZND Technology Assessment/Evaluation for email capability Tech Refresh	C/FFP	TBD : TBD	-	-		-		4.500	Feb 2019	-		4.500	Continuing	Continuing	-
DoD Cyber Security Range (CSR) Virtual Training Environment	C/FFP	ManTech : Fairfax, VA	-	-		-		1.198	Feb 2019	-		1.198	Continuing	Continuing	-
DoD Cyber Security Range (CSR) Virtual Training Environment - Re-compete	C/FFP	TBD : TBD	-	-		-		0.483	Jun 2019	-		0.483	Continuing	Continuing	-
DoD Endpoint Security Solutions (ESS)	C/FFP	TBD : TBD	-	-		-		3.000	Jan 2019	-		3.000	Continuing	Continuing	-
Cyber HQs Support	C/FFP	TBD : TBD	-	-		-		10.300	Jan 2019	-		10.300	Continuing	Continuing	-
Joint Information Operations Range (JIOR) Connection	C/FFP	TBD : TBD	-	-		-		0.130	Jan 2019	-		0.130	Continuing	Continuing	-
Subtotal			-	-		-		19.611		-		19.611	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		-	-	0.000	19.611	-	19.611	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Zero-Day Network Defense Email Capability																												
Zero-Day Network Defence (ZND) Email Capability Technology Assessment/ Evaluation for Tech Refresh																												
Cyber HQs Support																												
Test new Cybersecurity efforts using the CS Range																												
Increase capability to leverage CS Range for training and capstone events;																												
Increase capability for remote access to CS Range for testing, training and exercises.																												
Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements																												
JRSS Management System (JMS) Enhancements																												
Replicate the tactical network boundaries of the four services.																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303140K / <i>Information Systems Security Program</i>	Project (Number/Name) IA3 / <i>Information Systems Security Program</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Zero-Day Network Defense Email Capability</i>				
Zero-Day Network Defence (ZND) Email Capability Technology Assessment/ Evaluation for Tech Refresh	4	2018	4	2023
<i>Cyber HQs Support</i>				
Test new Cybersecurity efforts using the CS Range	4	2018	4	2023
Increase capability to leverage CS Range for training and capstone events;	4	2018	4	2023
Increase capability for remote access to CS Range for testing, training and exercises.	4	2018	4	2023
Implement Joint Regional Security Stacks (JRSS) Cloud Learning Environment improvements	4	2018	4	2023
JRSS Management System (JMS) Enhancements	4	2018	4	2023
Replicate the tactical network boundaries of the four services.	4	2018	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	510.091	21.438	42.687	46.900	-	46.900	40.218	18.075	17.990	18.408	Continuing	Continuing
CC01: <i>Global Command and Control System-Joint (GCCS-J)</i>	510.091	21.438	42.687	46.900	-	46.900	40.218	18.075	17.990	18.408	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Global Command and Control System-Joint (GCCS-J) funds a Joint Command and Control (JC2) portfolio which includes: GCCS-J, Joint Planning and Execution Services (JPES), and JC2 Architecture.

The GCCS-J Program is the Department of Defense (DoD) Joint C2 system of record. It incorporates core planning and assessment tools required by Combatant Commanders and their subordinate Joint Task Force Commanders while meeting the readiness support requirements of the Services. GCCS-J is used by all nine Combatant Commands (COCOMs) at sites around the world, supporting joint and coalition operations. The Services rely heavily on GCCS-J components to reduce their command and control (C2) operational costs. It provides support for commanders and staffs as they conduct joint and multinational operations by providing a fused picture of the battle space within an integrated system that is supporting joint warfighter needs today. GCCS-J is currently focused on sustainment, synchronization, and modernization to meet emerging operational needs by modifying and enhancing elements or capabilities in order to implement new requirements, enhance functionality, increase efficiency and lower operating and deployment costs while taking advantage of the progress made by current operational systems and technologies. The GCCS-J program is also executing incremental modernization of C2 capabilities using the Joint Requirements Oversight Council (JROC) approved needs.

JPES is a portfolio of capabilities supporting joint policies, processes, procedures, and reporting structures. It is supported by communications and information technology used by the Joint Planning and Execution Community (JPEC). JPEC uses these capabilities to monitor the following activities: planning, execute mobilization, deployment, employment and sustainment, redeployment, and demobilization. At full maturity, the JPES capabilities will be integrated with other adaptive planning and execution systems to facilitate the rapid development and sustainment of plans and a seamless, dynamic transition to execution in a net-centric environment. One of the key capabilities residing within the JPES portfolio of sustaining the existing Joint Operational Planning and Execution System (JOPES) while modernization of JOPES is planned and implemented. The JPES portfolio also includes a core set of infrastructure services consisting of the JPES Framework (JFW) and a variety of mission applications to include Joint Force Projection (JFP), Joint Capabilities Requirements Manager (JCRM) and eventually the capabilities that will replace JOPES.

JC2 Architecture is a reference architecture that aligns closely to the DoD Information Enterprise Architecture. The JC2 Architecture describes architectural and operational concepts, technical constructs, and is a repository for valuable reference information relating to C2 standards and information security. It is the authoritative source of information and technical direction for the JC2 arena.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	24.438	42.687	48.508	-	48.508
Current President's Budget	21.438	42.687	46.900	-	46.900
Total Adjustments	-3.000	0.000	-1.608	-	-1.608
• Congressional General Reductions	-3.000	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-1.608	-	-1.608

Change Summary Explanation

The decrease of -\$3.000 in FY 2017 is due to delayed development of modernized JPES velocity of JPES solution and JFW impacting schedule for analysis and solution development for obsolete software.

The decrease of -\$1.608 in FY 2019 is due to a reduction of operational capabilities requested by the user community and to sunset the previous version 4.3 in FY 2019/2020. The FY 2019 funding request was reduced by -\$1.189 to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>				Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
CC01: <i>Global Command and Control System-Joint (GCCS-J)</i>	510.091	21.438	42.687	46.900	-	46.900	40.218	18.075	17.990	18.408	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Command and Control System – Joint (GCCS-J) is DoD’s Joint Command and Control (JC2) system of record and provides the foundation for migration of service-unique C2 systems into a Joint, interoperable environment. The Defense Information System Agency’s (DISAs) portfolio includes funding to support GCCS-J, Joint Planning and Execution Services (JPES), and the development and sustainment of the JC2 Architecture. GCCS-J incorporates the core planning and assessment tools required by combatant commanders and their subordinate Joint Task Force Commanders while meeting the readiness support requirements of the Services. Adaptive Planning and Execution Joint Planning Services are being developed to modernize the adaptive planning functions in a net centric environment. DISA continues to provide support for the operational system to ensure continued access to information integration and decision-support capabilities that enable the exercise of authority and direction over assigned and attached forces, in a net-centric, collaborative information environment. Additionally, DISA provides critical C2 capabilities to the Commander-in-Chief, Secretary of Defense, National Military Command Center, Combatant Commands (COCOMs), Joint Force Commanders, and Service Component Commanders.

JPES is a set of capabilities that address components of the DOD’s Adaptive Planning Roadmap (13 December 2005) and Adaptive Planning Roadmap II (5 March 2008). JPES produces enhancements to the Joint Operations Planning and Execution System (JOPES), focused adaptive planning capabilities, and provides a set of core infrastructure services necessary to provide the warfighter a fully interoperable environment where functionality can be easily added as mission needs dictate.

The JC2 Architecture is a foundational element of JC2 capabilities for the Department. The JC2 Architecture provides a set of net-centric tenets associated with data, functional service and the C2 infrastructure that describes architectural and operational concepts, technical constructs, and is a repository for valuable reference information relating to C2 standards and information security. Each year, the DISA architecture team, annually, produces a transitional architecture that documents the current state of C2 capabilities, anticipated changes/enhancements either in progress or planned by the JC2 community.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Development and Strategic Planning	8.330	31.284	41.622
<p>Description: Develop, publish, and execute a GCCS-J migration and modernization strategy that achieves the following GCCS-J Modernization objectives in accordance with Joint C2 Mission operational priorities and the DoD’s JC2 Reference Architecture:</p> <ul style="list-style-type: none"> • Continue to decompose applicable existing applications into services • Limit local deployment and move as much to the enterprise as possible • Continue to expose data and scale services to support an enterprise implementation 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> Continue to evolve more economical hardware and software architecture without impact to the operational user or Family of Systems (FoS)/interface partners Reduce overall sustainment cost through use of more cost effective and appropriate Commercial-off-the-Shelf (COTS) and Hardware (HW) products Evolve to use of agile development practices Consolidation of clients and tools <p>FY 2018 Plans: The GCCS-J program will continue to update and execute the GCCS-J Modernization planning guidance based on operational priorities, and updated DoD guidance. These updates will support the Joint C2 Analysis of Alternatives (AoA) goals of reducing cost, providing additional capability to the warfighter and sustaining existing C2 capabilities. Planned activities include further prototype, proof of concept and experimental efforts that will focus on transitioning GCCS-J to an open standards architecture deployable in a variety of operational environments (i.e. local, cloud, mobile, etc). This effort will include development of GCCS-J capabilities to enhance functionality, modernize and enhance the security posture of the application, increase efficiency, and lower operating and deployment costs through the employment of new and emerging technologies.</p> <p>The increase of +\$22.954 from FY 2017 to FY 2018 will modernize GCCS-J into a cloud-based, enterprise system which DISA will use to provide C2 as a service throughout DoD, including the services.</p> <p>FY 2019 Plans: Will modernize the current GCCS-J operational systems while maintaining synchronization across DoD of GCCS-J, joint interfaces and the GCCS Family of Systems, enhance the security posture of GCCS-J applications; and deliver and sustain the final installment of the GCCS-J "must-haves" capabilities. The GCCS-J "must haves" is the set of capabilities identified by the Joint Staff and C2 community as absolutely critical to allow GCCS-J sites to migrate away from the current costly legacy hardware and COTS platform to more cost effective solutions. The modernization effort will improve the current GCCS-J system's limitations and its ability to address current and projected cybersecurity and the increasing fragility of old code that puts the joint warfighter (front line to President) at risk jeopardizing operations and increasing fratricide risk.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$10.338 from FY 2018 to FY 2019 will develop the infrastructure and capabilities that will be deployed on the GCCS-J Enterprise.</p>				
Title: Joint Planning and Execution Services (JPES)		13.108	11.403	5.278
Description: JPES is a collection of capabilities supporting joint policies, processes, procedures, and reporting structures, that are supported by communications and information technology used by the JPEC. JPEC uses these capabilities to monitor, plan, and				

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
execute: mobilization, deployment, employment, sustainment, redeployment, and demobilization activities associated with joint operations.			
<i>FY 2018 Plans:</i> Continue improvements/expansion of JFW services providing enhanced system administration tools for monitoring and managing the JFW infrastructure, new data services in support of modernizing the JOPES user tools, continued streamlining of ported legacy interfaces to JFW for support legacy systems moving off JOPES to the modernized JFW architecture.			
The decrease of -\$1.705 from FY 2017 to FY 2018 will slow the velocity of JPES solution and JFW impacting schedule. Part of the overall decrease (-\$0.640) is attributed to the Service Requirements Review Board (SSRB) contract reduction.			
<i>FY 2019 Plans:</i> Continue to modernize JPES improving performance on the Framework, develop additional data services, develop additional enhancements to the user interface to support new user requirements.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The decrease of -\$6.125 from FY 2018 to FY 2019 is due to completing phase I modernization and sun-setting JOPES legacy system.			
Accomplishments/Planned Programs Subtotals	21.438	42.687	46.900

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PE 0303150K: <i>Operation & Maintenance, Defense-Wide</i>	83.416	86.219	92.415	-	92.415	93.315	95.142	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy
Use of performance-based contract awards is maximized while use of Time and Material contracts is minimized to those providing programmatic support versus software development, integration, or testing. All development, integration, and migration efforts within the portfolio are primarily supported through Cost Reimbursable Task Orders issued under competitively awarded contracts. Acquisition Strategies are structured to retain contractors capable of satisfying cost, schedule, and performance objectives. Contract awards incorporate provisions requiring contractors to establish and manage specific earned value data. This strategy mitigates risk by requiring monthly Contract Performance Reviews (CPRs) and utilizing award fee contracts where appropriate to incentivize performance. Both GCCS-J and JPES apply formal acquisition rigor to include reporting requirements, as appropriate, by acquisition program designation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>

E. Performance Metrics

Activity: Effectively communicate with external command and control systems

FY 2017 (Estimated): 100% successful test of new critical system interfaces, as well as continued 100% successful test of critical current system interfaces.
 FY 2017 (Actual): 100% successfully tested new critical system interfaces, as well as continued 100% successfully tested the critical current system interfaces.
 FY 2018 (Estimated): 100% successful test of new critical system interfaces, as well as continued 100% successful test of critical current system interfaces.

Activity: Fuse select C2 capabilities into a comprehensive, interoperable system eliminating the need for inflexible, duplicative, stovepipe C2 systems.

FY 2017 (Estimated): Successful fielding of GCCS-J Global Release 6.0 to designated Critical Sites
 FY 2017 (Actual): Successfully fielded GCCS-J Global Release 6.0 to designated Critical Sites
 FY 2018 (Estimated): Successful fielding of GCCS-J Global Release 6.X

Activity: Development of JOPES Modernization

FY 2017 (Estimated): Successfully complete improvements/expansion of JPES Framework (JFW) services providing enhanced system administration tools for monitoring and managing the JFW infrastructure and new data services. FY 2017 Estimated: 50%
 FY 2017 (Actual): Successfully completed improvements/expansion of JPES Framework (JFW) services providing enhanced system administration tools for monitoring and managing the JFW infrastructure and new data services. FY 2017 Actual: 50%
 FY 2018 (Estimated): Successfully complete improvements/expansion of JPES Framework (JFW) services providing enhanced system administration tools for monitoring and managing the JFW infrastructure and new data services. FY 2018 Estimated: 50%

Activity: Modernize GCCS-J infrastructure components to reduce overall costs (COTS & HW), increase scalability and performance through shift to enterprise deployment. Reduce release cycles through agile development and deployment.

FY 2017 (Estimated): Achieve Fielding Decision Review (FDR) for Agile Client Release 8 (R8). FY17 Estimated: 100%
 FY 2017 (Actual): Achieved Fielding Decision Review (FDR) for Agile Client Release 8 (R8). FY17 Actual: 100%
 FY 2018 (Estimated): Achieve Fielding Decision Review (FDR) for Data Virtualization Layer Phase II. FY18 Estimated: 100%

Activity: Incrementally Develop, Test, and Field GCCS-J 6.0.x "Critical Must Have" Capabilities to the 53 Critical Sites designated by the Joint Staff J3. FY19 - Release and deploy GCCS-J 6.0.1.0 to the operational community, satisfying 100% of the "Critical Must Have" capabilities.

FY 2017 Target: N/A
 FY 2018 Target: N/A
 FY 2019 (Estimated): Expected to Meet

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>
<p>Activity: Complete development of JOPES Modernization Phase I FY17 Framework Release 5 and User Interface Release 2; FY18 Framework Release 6 and User Interface Release 3; FY19 Framework Release 7 and User Interface Release 4</p> <p>FY 2017 Target: N/A FY 2018 Target: N/A FY 2019 (Estimated): Expected to Meet</p> <p>Activity: Modernize GCCS-J To Provide a Cloud Based, Mobile, Enterprise Delivery of Legacy GCCS-J Capabilities (GCCS-J Enterprise). FY 19 - Field the GCCS-J Enterprise Initial Operating Capability.</p> <p>FY 2017 Target: N/A FY 2018 Target: N/A FY 2019 (Estimated): Expected to Meet</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development 1	C/CPFF	NGMS : Reston, VA	20.289	-		-		-		-		-	0.000	20.289	20.289
Product Development 2	FFRDC	MITRE : McLean, VA	7.077	-		-		-		-		-	0.000	7.077	7.077
Product Development 3	SS/FFP	Dynamic Systems : Los Angeles, CA	3.189	-		-		-		-		-	0.000	3.189	3.189
Product Development 4	C/CPFF	Pragmatics : McLean, VA	31.239	-		-		-		-		-	0.000	31.239	31.239
Product Development 6	C/CPIF	BAH : McLean, VA	3.369	-		-		-		-		-	0.000	3.369	3.369
Product Development 7	C/CPIF	JPES Framework : Various	19.554	-		-		-		-		-	0.000	19.554	19.554
Product Development 8	C/CPFF	RTB Development : Various	13.116	-		-		-		-		-	0.000	13.116	13.116
Product Development 9	C/CPFF	IGS Development : Various	12.398	-		-		-		-		-	0.000	12.398	12.398
Product Development 10	C/CPFF	SAIC : Falls Church, VA	4.826	-		-		-		-		-	0.000	4.826	4.826
Product Development 11	MIPR	SSC : San Diego, CA	13.317	-		-		-		-		-	0.000	13.317	13.317
Product Development 12	C/CPFF	NGMS : Reston, VA	67.014	-		-		-		-		-	0.000	67.014	67.014
Product Development 13	MIPR	NGIT : Various	1.772	-		-		-		-		-	0.000	1.772	1.772
Product Development 14	C/CPFF	NGMS : Reston, VA	79.473	6.718	Feb 2017	-		0.700	Oct 2018	-		0.700	Continuing	Continuing	Continuing
Product Development 15	C/CPIF	Booz Allen Hamilton : McLean, VA	3.283	-		-		-		-		-	0.000	3.283	3.283
Product Development 16	C/CPFF	Booz Allen Hamilton : Various	3.685	-		-		-		-		-	0.000	3.685	3.685
Product Development 17	C/CPAF	Booz Allen Hamilton : Falls Church, VA	1.229	-		-		-		-		-	0.000	1.229	1.229
Product Development 18	C/CPAF	AB Floyd : Alexandria, VA	12.477	-		-		-		-		-	0.000	12.477	12.477
Product Development 19	C/CPAF	Femme Comp Inc : Chantilly, VA	7.249	-		-		-		-		-	0.000	7.249	7.249

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency												Date: February 2018			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 7				PE 0303150K / Global Command and Control System				CC01 / Global Command and Control System-Joint (GCCS-J)							
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 20	C/CPFF	SAIC : Falls Church, VA	5.876	-		-		-		-		-	0.000	5.876	5.876
Product Development 21	C/CPIF	Booz Allen Hamilton : McLean, VA	5.865	-		-		-		-		-	0.000	5.865	5.865
Product Development 22	MIPR	JDISS : Various	6.039	-		-		-		-		-	0.000	6.039	6.039
Product Development 23	C/FFP	NGMS : Reston, VA	4.790	-		-		-		-		-	0.000	4.790	4.790
Product Development 24	MIPR	SPAWAR : Charleston, SC	10.034	-		0.721	Sep 2018	-		-		-	0.000	10.755	10.755
Product Development 25	MIPR	Dept of Energy, Army Research Lab, PD Intelligence Fusion, GSA/FAS : Various	5.710	-		-		-		-		-	0.000	5.710	5.710
Product Development 26	C/CPAF	Tactical 3-D COP : Various	3.200	-		-		-		-		-	0.000	3.200	3.200
Product Development 27	SS/FFP	JITC : Various	20.400	-		-		-		-		-	0.000	20.400	20.400
Product Development 28	C/CPFF	TBD - JCRM : TBD	6.800	1.800	Sep 2017	-		-		-		-	Continuing	Continuing	Continuing
Product Development 30	C/CPFF	TBD : TBD	5.422	4.208	Sep 2017	4.400	Sep 2018	4.200	Sep 2019	-		4.200	Continuing	Continuing	Continuing
Product Development 31	C/TBD	TBD : TBD	5.367	-		-		-		-		-	Continuing	Continuing	Continuing
Product Development 32	C/CPFF	TBD : TBD	-	-		10.500	Feb 2018	11.500	Sep 2019	-		11.500	Continuing	Continuing	Continuing
Product Development 33	C/TBD	TBD : TBD	4.673	-		-		-		-		-	0.000	4.673	4.673
Engineering Services and Integration 29	SS/FFP	TBD : Various	6.782	-		-		-		-		-	0.000	6.782	6.782
I3 Engineering Services & SW Development	C/TBD	NGIT : Various	1.811	-		-		-		-		-	0.000	1.811	1.811
Product Development 29	TBD	JOPEs modernization : TBD	4.443	5.805	Oct 2016	-		-		-		-	Continuing	Continuing	Continuing
Product Development 34	C/CPFF	TBD : TBD - JPES	0.000	-		7.400	Jan 2018	4.524	Jan 2019	-		4.524	Continuing	Continuing	Continuing
Product Development	C/CPFF	TBD : TBD - GCCS-J	0.000	-		17.566	Feb 2018	23.947	Feb 2019	-		23.947	Continuing	Continuing	Continuing
Subtotal			401.768	18.531		40.587		44.871		-		44.871	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support 1	C/T&M	Oracle : Various	1.003	-		-		-		-		-	0.000	1.003	1.003
Support 2	C/CPFF	JC2 Common Interface : Various	4.808	-		-		-		-		-	0.000	4.808	4.808
Support Costs - Engineering Support 3	FFRDC	MITRE : Various	0.754	-		-		-		-		-	0.000	0.754	0.754
Support Costs - Engineering Support 4	C/CPFF	Pragmatics : McLean, VA	3.799	-		-		-		-		-	0.000	3.799	3.799
Support Costs - Engineering Support 5	C/CPFF	IPA : College Park, MD	0.283	-		-		-		-		-	0.000	0.283	0.283
Support Cost 6	C/FFP	STA : Falls Church, VA	2.772	-		-		-		-		-	0.000	2.772	2.772
Support Costs	C/CPFF	TBD : TBD	3.700	0.857	Sep 2017	-		-		-		-	0.000	4.557	4.557
Support Cost 7	TBD	Pragmatics : McLean, VA	3.564	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			20.683	0.857		-		-		-		-	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation 1	C/TBD	SAIC : Falls Church, VA	0.744	-		-		-		-		-	0.000	0.744	0.744
Test & Evaluation 2	MIPR	JITC : Ft. Huachuca, AZ	29.565	1.500	Sep 2017	1.500	Sep 2018	0.800	Oct 2018	-		0.800	Continuing	Continuing	Continuing
Test & Evaluation 3	MIPR	DIA : Various	9.024	0.080	Jun 2017	-		0.629	Jan 2019	-		0.629	Continuing	Continuing	Continuing
Test & Evaluation 4	MIPR	DAA : Various	3.282	0.470	Jun 2017	0.600	Sep 2018	0.600	Sep 2019	-		0.600	Continuing	Continuing	Continuing
Test & Evaluation 5	C/CPFF	SAIC : Falls Church, VA	9.681	-		-		-		-		-	0.000	9.681	9.681
Test & Evaluation 6	C/CPAF	SAIC : Falls Church, VA	23.133	-		-		-		-		-	0.000	23.133	23.133

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation 7	C/CPFF	Pragmatics : McLean, VA	0.308	-		-		-		-		-	0.000	0.308	0.308
Test & Evaluation 8	MIPR	JITC : Various	0.005	-		-		-		-		-	0.000	0.005	0.005
Test & Evaluation 9	MIPR	JITC : Various	0.897	-		-		-		-		-	0.000	0.897	0.897
Test & Evaluation 10	MIPR	DISA FSO : Various	1.059	-		-		-		-		-	0.000	1.059	1.059
Test & Evaluation 11	MIPR	TEMC Test Support : Various	0.229	-		-		-		-		-	0.000	0.229	0.229
Test & Evaluation 12	MIPR	DISA TEMC : Falls Church, VA	0.971	-		-		-		-		-	0.000	0.971	0.971
Test & Evaluation 13	MIPR	STRATCOM : Offut, NE	1.155	-		-		-		-		-	0.000	1.155	1.155
Test & Evaluation 14	MIPR	DISA FSO : Falls Church, VA	1.200	-		-		-		-		-	0.000	1.200	1.200
Test & Evaluation 15	C/CPFF	TQI : Falls Church, VA	1.698	-		-		-		-		-	0.000	1.698	1.698
Test & Evaluation 16	C/CPFF	TQI : Falls Church, VA	0.494	-		-		-		-		-	0.000	0.494	0.494
Test & Evaluation 17	MIPR	Slidell : Various	0.436	-		-		-		-		-	0.000	0.436	0.436
Subtotal			83.881	2.050		2.100		2.029		-		2.029	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Services	MIPR	SSC Atlantic : Charleston, SC	3.759	-		-		-		-		-	0.000	3.759	3.759
Subtotal			3.759	-		-		-		-		-	0.000	3.759	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency								Date: February 2018			
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>				Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>				
	Prior Years	FY 2017	FY 2018		FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	510.091	21.438	42.687		46.900	-	46.900	Continuing	Continuing	N/A	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Development and Strategic Planning	[Redacted]																											
Integration and Test	[Redacted]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Strategic Planning	1	2017	4	2023
Integration and Test	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	171.579	12.686	8.750	7.570	-	7.570	9.698	9.836	9.251	8.292	Continuing	Continuing
JS1: <i>Joint Spectrum Center</i>	171.579	12.686	8.750	7.570	-	7.570	9.698	9.836	9.251	8.292	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Spectrum Organization (DSO) provides a full array of electromagnetic spectrum services and capabilities, ranging from short notice on-the-ground operational support at the forward edge, to long range planning in pursuit of national strategic objectives. These services/capabilities are in direct support of Combatant Commanders, the Department of Defense (DoD) Chief Information Officer, Military Services, and Defense Agencies. The DSO is the focal point for electromagnetic spectrum analysis and the development of integrated spectrum plans and strategies to address current and future needs for DoD spectrum access. In addition, DSO serves as DoD's spectrum advocate at national and international forums and conducts extensive outreach to both industry and government. DSO also implements enterprise spectrum management capabilities to enhance spectrum efficiency and agility to improve spectrum-dependent capabilities in support of United States and Coalition operations. This includes acquiring, implementing and sustaining the Global Electromagnetic Spectrum Information System (GEMSIS) which provides an integrated catalog of joint net-centric spectrum management tools and services. Electromagnetic Spectrum Management enables information dominance through effective spectrum operations.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	13.197	8.750	9.073	-	9.073
Current President's Budget	12.686	8.750	7.570	-	7.570
Total Adjustments	-0.511	0.000	-1.503	-	-1.503
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.511	0.000	-1.503	-	-1.503

Change Summary Explanation

The decrease of -\$1.503 in FY 2019 is due to a reduction in the number of prototype assessments for future capabilities. The FY 2019 funding request was reduced by -\$1.425 to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>JS1: Joint Spectrum Center</i>	171.579	12.686	8.750	7.570	-	7.570	9.698	9.836	9.251	8.292	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Spectrum Center (JSC), which is a division of Defense Spectrum Organization (DSO), designs, develops, and maintains Department of Defense (DoD) automated spectrum management systems, evaluation tools, and databases. The databases are the prime sources of information for DoD use of the electromagnetic (EM) spectrum. The JSC provides technical measurement and analysis in support of DoD spectrum policy decisions to ensure the development, acquisition, and operational deployment of systems are compatible with other spectrum dependent systems operating within the same EM environment (EME). Additional efforts focus on improving future warfighter EM spectrum utilization through technological innovation, and influencing research and development emerging technology efforts.

Improved spectrum support includes the Global Electromagnetic Spectrum Information System (GEMSIS), a net centric capability that will provide commanders with an increased common picture of spectrum situational awareness of friendly and hostile forces while transparently deconflicting competing mission requirements for spectrum use. This capability will enable the transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Advanced Spectrum Tools	0.883	0.883	0.883
Description: The Joint Spectrum Data Repository and Tools program supports development of spectrum management tools, spectrum modeling and simulation capabilities, spectrum database development, and spectrum data transformation and standardization. This program provides the Combatant Commands (COCOMs) and Military Services with the spectrum management tools and associated databases to manage spectrum resources at the strategic and operational level. It also provides the DoD acquisition community with analytical tools to conduct Electromagnetic Environmental Effects (E3) analyses and Spectrum Supportability Risk Assessments (SSRA).			
FY 2018 Plans: Enhancements to Spectrum Technology and Testbed Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.			
FY 2019 Plans: Will continue to make enhancements to Spectrum Technology and Testbed Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.			
Title: DoD Electromagnetic Environmental Effects (E3) Program	0.000	3.315	3.315

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Description: The DoD E3 Program supports the Joint Capabilities Integration and Development System (JCIDS) process and the DoD acquisition process to ensure that E3 control and spectrum supportability are incorporated into the development, testing, and procurement of information technology and National Security Systems. The E3 Program also supports the development of the Joint Ordnance E3 Risk Assessment Database (JOERAD) and Hazards of Electromagnetic Radiation to Ordnance (HERO) electromagnetic environmental effects surveys in support of the COCOMs and Joint Task Forces. JOERAD develops algorithms and provides analytical capabilities to perform real-time risk assessments to evaluate platform/system safety and identify equipment limitations in the operational EM environment. JOERAD enables operators to make critical decisions about the hazards associated with the use of ordnance within complex EM environments. A SSRA is performed by program managers and materiel developers on all programs that are acquiring or incorporating spectrum-dependent systems or equipment per DoDI 4650.1. These assessments encompassed regulatory, technical, and operational spectrum and E3 issues and associated risks.</p> <p>FY 2018 Plans: Enhancements to Spectrum Technology and Testbed Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.</p> <p>The increase of +\$3.315 from FY 2017 to FY 2018 supports additional HERO surveys for Forward Deployed Forces, Ordnance susceptibility updates, and acquisition program E3 reviews and guidance.</p> <p>FY 2019 Plans: Will continue to conduct Joint Ordnance Commanders Group (JOCG) HERO Subgroup meetings, support the JOCG Executive Steering Committee and develop and maintain the Services' HERO susceptibility data records. Will conduct forward deployed base HERO surveys for the COCOMs/Services, and CONUS based equipment which emits radio frequencies (emitter) surveys for ordnance safety database validation and update the DoD ordnance Radio Frequency (RF) safety requirements. Will update MIL-HDBK-235, "Electromagnetic Environment (EME) Profiles" and develop EME (profiles to address blue force jammer and electronic warfare environments. Will conduct monthly DoD E3 Integrated Product Team (IPT) Meetings. Will provide technical support to DoD CIO, the Joint Staff, and other DoD Components on E3, spectrum, hazards of EM radiation matters. Will review JCIDS and Information Support Plan (ISP) acquisition documents assigned by the Joint Staff and DoD CIO and update guidance instructions as necessary. Will provide E3 and SS training to the DoD Components and develop/maintain training curricula at the Defense Acquisition University.</p> <p>Title: Emerging Spectrum Technologies (EST)</p> <p>Description: DSO has the responsibility to investigate emerging spectrum related technologies and evaluate their applicability to improve future warfighter EM spectrum utilization through technological innovation. The goal of the EST program is to identify the opportunities and risks associated with emerging spectrum-related technologies in the early stages of the technology</p>			
	3.251	3.715	2.566

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>development, influence and lead technology development in order to maximize DoD spectrum utilization, and ensure that spectrum policies incorporate optimal technology to meet DoD mission requirements. Within EST there is an increased focus on Dynamic Spectrum Access (DSA). DSA is realized through wireless networking architectures and technologies that enable wireless devices to dynamically adapt their spectrum access according to criteria such as policy constraints, spectrum availability, propagation environment, and application performance requirements.</p> <p>FY 2018 Plans: Will continue collaboration efforts with the Science and Technology community (including ASDR&E, Service Labs and DARPA) to develop and execute the technology roadmaps and integration strategies that result in system flexibility and operational agility. Revisions will be made to the current spectrum management architecture to reflect transforming spectrum operations through application of EST in accordance with the new DoD EMS Spectrum Strategy. Prototype capabilities that provide increased operational agility will be developed and demonstrated. Continue to develop initiatives that include the roadmap, standards, architecture, and business processes to exploit and/or minimize the impact of emerging technologies on DoD spectrum operations.</p> <p>The increase of +\$0.464 from FY 2017 to FY 2018 will begin examination and impact assessments of the most mature portions of the SAR&DP, STR, and AWS-3 SSTD efforts. Produce specific algorithmic and technique changes associated with specific tools and techniques in current use. Prototype implementations to verify viability and collect metrics on improvements.</p> <p>FY 2019 Plans: Will continue collaboration efforts with the Science and Technology community (including ASDR&E, Service Labs and DARPA) to develop and execute the technology roadmaps and integration strategies that result in system flexibility and operational agility. Revisions will be made to the current spectrum management architecture to reflect transforming spectrum operations through application of EST in accordance with the new DoD EMS Spectrum Strategy. Prototype capabilities that provide increased operational agility will be developed and demonstrated. Continue to develop initiatives that include the roadmap, standards, architecture, and business processes to exploit and/or minimize the impact of emerging technologies on DoD spectrum operations.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$1.149 from FY 2018 to FY 2019 is due to an increase in the number of prototype assessments that will be accomplished during FY 2019.</p>				
Title: Global Electromagnetic Spectrum Information System (GEMSIS)		8.552	0.837	0.806
Description: The GEMSIS is a net centric capability that will provide operational commanders with an increased common picture of spectrum situational awareness of friendly and hostile forces while transparently deconflicting competing mission requirements				

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
for spectrum use. This capability will enable the transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations.			
<i>FY 2018 Plans:</i> Continue Spectrum XXI (SXXI) Legacy, End to End Supportability System (E2ESS), and JSDR maintenance and version releases.			
The decrease of -\$7.715 in FY 2018 is due to completion of Increment 2 development efforts. Part of the overall decrease (-\$0.328) is attributed to the Service Requirements Review Board (SSRB) contract reduction.			
<i>FY 2019 Plans:</i> Continue SXXI Legacy, E2ESS, and Joint Spectrum Data Repository (JSDR) maintenance and version releases.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The decrease of -\$0.031 FY 2018 to FY 2019 is due to reduction in contract requirements to support software version releases.			
Accomplishments/Planned Programs Subtotals	12.686	8.750	7.570

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M, DW/PE 0303153K: O&M, DW	33.014	36.408	35.707	-	35.707	36.072	36.067	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy
Engineering support services are provided by the use of a contract. No in-house government capability exists, nor is it practical to develop one that can provide the expertise necessary to fulfill the mission and responsibilities of DSO. Full and open competition was used for the current contract with EXELIS, Inc. GEMSIS' acquisition approach is to obtain capabilities by adopting existing capabilities, buying commercial products, or developing new capabilities by delivering incrementally within the context of a streamlined and adaptive acquisition approach.

E. Performance Metrics
1. Provide engineering support to DoD Components to ensure E3 and spectrum supportability requirements are addressed during the acquisition life-cycle meeting at least 90% of program suspenses.
2. Execute effective emerging spectrum technologies evaluation process that generates timely and relevant products evaluating at least 3 technologies per quarter.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>
<p>3. Provide technical E3 and spectrum engineering support upon request from the Combatant Commands, their components and the Military Services with a minimum 98% response rate.</p> <p>4. Develop an operational Joint spectrum management system that delivers at least 90% of products on schedule in accordance with objective scheduled events and deliverables as approved in the Acquisition Program Baseline- Schedule Status of systems.</p> <p>All metric results are classified.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical Engineering Services 1	C/FFP	Multi : Various	156.086	11.365	Oct 2016	8.424	Oct 2017	7.240	Oct 2018	-		7.240	Continuing	Continuing	Continuing
Technical Engineering Services 2	MIPR	Various : Various	4.427	1.016	Oct 2016	0.326	Oct 2017	0.330	Oct 2018	-		0.330	Continuing	Continuing	Continuing
Subtotal			160.513	12.381		8.750		7.570		-		7.570	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test & Evaluation	MIPR	JITC : Ft. Huachuca	2.312	-		-		-		-		-	0.000	2.312	2.312
Subtotal			2.312	-		-		-		-		-	0.000	2.312	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Services	FFRDC	MITRE : Ft. Monmouth, NJ	8.754	0.305	Oct 2016	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			8.754	0.305		-		-		-		-	Continuing	Continuing	N/A

			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			171.579	12.686	8.750	7.570	-	7.570	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Joint Spectrum Center																												
Spectrum Tool (SXXI, CJSMP, JSDR) Version Releases	[REDACTED]																											
Joint Ordnance E3 Risk Assessment Database (JOERAD) Releases	[REDACTED]																											
Emerging Spectrum Technology Research Projects	[REDACTED]																											
Spectrum Data Sharing Capability Deployments	[REDACTED]																											
Increment Two GEMISIS	[REDACTED]																											
E3 Program Outputs	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Joint Spectrum Center				
Spectrum Tool (SXXI, CJSMPPT, JSDR) Version Releases	3	2017	4	2023
Joint Ordnance E3 Risk Assessment Database (JOERAD) Releases	3	2017	4	2023
Emerging Spectrum Technology Research Projects	3	2017	4	2023
Spectrum Data Sharing Capability Deployments	3	2017	4	2023
Increment Two GEMISIS	1	2017	4	2018
E3 Program Outputs	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303228K <i>Joint Information Environment</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	2.789	4.689	7.947	-	7.947	2.797	2.882	2.947	3.021	Continuing	Continuing
JE1: <i>Joint Regional Security Stacks</i>	0.000	2.789	4.689	7.947	-	7.947	2.797	2.882	2.947	3.021	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Information Environment (JIE) construct is a consolidated secure and defensible environment across DoD. This is comprised of unified, consolidated and shared information technology (IT) infrastructure, enterprise services, and standardized security architectures throughout the Department of Defense Information Network (DODIN) to achieve full spectrum superiority, improve mission effectiveness, increase security and realize IT efficiencies.

The target objective state of JIE is a DODIN that optimizes the use of DoD's IT assets from the administrative and operational planning at the Pentagon to the tactical edge; to include our mission partners through converging communications, computing, enterprise services, and defense of the DODIN that can be leveraged for all Department missions.

When implemented, JIE will reduce DoD's Total Cost of Ownership (TCO), improved security by reducing the attack surface of our networks, and enable Combatant Commands/Services/Agencies (CC/S/A) to more efficiently access information to perform their missions from any authorized IT device, any time, from anywhere in the world.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	2.789	4.689	2.854	-	2.854
Current President's Budget	2.789	4.689	7.947	-	7.947
Total Adjustments	0.000	0.000	5.093	-	5.093
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	5.093	-	5.093

Change Summary Explanation

An increase of \$5.093 in FY 2019 is attributed to additional Cyber Situational Awareness Analytic Capabilities (CSAAC) analytic development and JRSS operational testing support.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303228K / Joint Information Environment			Project (Number/Name) JE1 / Joint Regional Security Stacks				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JE1: Joint Regional Security Stacks	0.000	2.789	4.689	7.947	-	7.947	2.797	2.882	2.947	3.021	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment. The JRSS Management System (JMS) is the management and operational control suite/capability for the JRSS. While the JMS is treated as a related effort, it requires its own experience and evaluation strategy as the JMS is a selection of best of breed capabilities. The JMS is a system-of-systems designed to centralize and enhance the management of the JRSS components and achieve economies of scale by using DoD common suites/infrastructure. The savings are realized by coupling the JRSS and JMS. The JRSS collapses replicated IT security functionality for all Department of Defense (DoD) components into relatively few regionally located stacks. The JMS provides Centralized Network Management of the JRSS with a standard interoperable set of capabilities across DoD. JMS provides visibility and control over network transport and associated security systems. It enables monitoring and analysis of relevant fault and performance data to determine the impact on current operations and trend analysis. This centralized capability allows standardization of policies, procedures and configurations of critical network transport assets. The JMS enables DoD Components to maintain Title 10 required management and visibility of their IT security while providing high level visibility to CYBERCOM. Cyber Operations can take proactive actions to ensure the uninterrupted availability and protection of system and network information.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Regional Security Stacks	2.789	4.689	7.947
Description: The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment.			
FY 2018 Plans: Provide integration, testing and development of next-generation JRSS 2.0 capabilities that will provide even greater situational awareness for the cyber operator.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>The increase of +\$1.900 from FY 2017 to FY 2018 is to support testing and Analytic development for medium complexity use cases and widget/application development. This increase is partially offset by a decrease of -\$0.107 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p> <p>FY 2019 Plans: Will provide integration, testing, and development of JRSS/JMS hardware/software to support tech refresh of end-of-support/end-of-life appliances. Support the development and testing of (DoD Cyber Situational Awareness Analytic Capabilities) CSAAC analytics.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of +\$3.258 from FY 2018 to FY 2019 is due to the additional CSAAC analytic development.</p>			
Accomplishments/Planned Programs Subtotals	2.789	4.689	7.947

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment. The JRSS Management System (JMS) is the management and operational control suite/capability for the JRSS. While the JMS is treated as a related effort, it requires its own experience and evaluation strategy as the JMS is a selection of best of breed capabilities. The JMS is a system-of-systems designed to centralize and enhance the management of the JRSS components and achieve economies of scale by using DoD common suites/infrastructure. The JMS provides Centralized Network Management of the JRSS with a standard interoperable set of capabilities across DoD. JMS provides visibility and control over network transport and associated security systems. It enables monitoring and analysis of relevant fault and performance data to determine the impact on current operations and trend analysis. This centralized capability allows standardization of policies, procedures and configurations of critical network transport assets. The JMS enables DoD Components to maintain Title 10 required management and visibility of their IT security while providing high level visibility to CYBERCOM. Cyber Operations can take proactive actions to ensure the uninterrupted availability and protection of system and network information.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>
FY 2017 (Estimated): 100% successful testing of new pre-production capabilities for Full Packet Capture analytics (e.g., ArcSight and Splunk logs); JMS 1.5 data orchestrator aggregation; and JRSS 1.5 active stack capabilities through the Joint Interoperability Test Command		
FY 2017 (Actual): 100% successfully tested new pre-production capabilities for Full Packet Capture analytics (e.g., ArcSight and Splunk logs); JMS 1.5 data orchestrator aggregation; and JRSS 1.5 active stack capabilities through the Joint Interoperability Test Command.		
FY 2018 (Estimated): 100% successful testing of new pre-production capabilities for Full Packet Capture analytics (e.g. ArcSight and Splunk log); JMS 1.5 data orchestrator aggregation; and JRSS 1.5 active stack capabilities through the Joint Interoperability Test Command.		
FY 2019 (Estimated): 100% successful testing of JRSS tech refresh hardware/software and testing of six medium complexity analytics.		

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>JIE</i>																												
JIE	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>JIE</i>				
JIE	1	2017	1	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	75.000	50.000	39.400	-	39.400	9.556	9.619	9.801	9.906	Continuing	Continuing
KA1: <i>Federal Investigative Services Information Technology</i>	0.000	75.000	50.000	39.400	-	39.400	9.556	9.619	9.801	9.906	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Develop an enterprise Information Technology (IT) architecture and data strategy for modernizing Investigative capabilities supporting background investigations (BI) (replacing capabilities such as Office of Personnel Management (OPM)'s eAdjudication and eApplication). Provides a new, secure infrastructure and investigative support system for DoD and Federal Agencies utilizing web/cloud based capabilities and robust cybersecurity. Leverages DoD's cybersecurity capabilities and national security focus to protect government and contractors' personal and investigative information. Supports the distributed adjudication processes with built-in security; active governance structure, and a new national security culture based on process improvement/change management.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	75.000	50.000	10.028	-	10.028
Current President's Budget	75.000	50.000	39.400	-	39.400
Total Adjustments	0.000	0.000	29.372	-	29.372
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	29.372	-	29.372

Change Summary Explanation

The increase of +\$29.372 in FY 2019 will continue development to meet FOC requirements, providing increased capabilities to better align with the program schedule and product delivery estimates. These funds will improve capabilities and performance envelope by increasing automation; continuous evaluation; insider threat tools; customization within the case management system; adding more automated record checks, better scalability for the entire federal government and expanding security checks from Tier 3 to all Tiers.

C. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Background Investigation Information Technology Systems	75.000	50.000	39.400

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>
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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Description: Implements the decision by the Interagency Deputies Committee and the Office of Management and Budget (OMB) to transfer responsibility for the development and sustainment of new Federal Government background investigation information technology (IT) system(s) from the OPM to the DoD beginning in FY 2017.</p> <p>FY 2018 Plans: DoD will continue to design, build and field a new Federal Government background investigation information technology system. The new system will defend against cyber attacks and improve defensibility. DoD will work and consult with the OMB, DNI and the OPM. This new system will provide a service to the whole federal government, not just DoD.</p> <p>The decrease of -\$25.000 from FY 2017 to FY 2018 is due to the completion of initial advanced development capabilities and the planned transition to sustainment of initial capabilities delivered in FY 2017. Advanced development capabilities prototyped in FY 2017 included (not limited to): Case Management, Imaging, Workflow Management, Virtual System Access, Automated Records Check, and E-Application. These advanced capabilities will reduce overall program and technical risk with respect to delivery of the new National Background Investigation System.</p> <p>FY 2019 Plans: DoD will continue to enhance and improve the capability of the Initial Operational Capability (IOC) schedule for delivery at the end of FY18 to achieve full operational capability (FOC) at the end of fiscal year 19 by adding automation pulls from various data sources; providing capability for insider threat analysis; development and deployment of continuous evaluation capabilities; and tailoring to non DoD systems. The FOC system will continue to defend against cyber-attacks and improve defensibility. This FOC system will provide the full suite of background investigation services to the whole federal government, not just DoD.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease of -\$10.600 from FY 2018 to FY 2019 is attributed to reduced testing activities associated with software development, and engineering support for development of the system as it finishes IOC and focuses on FOC.</p>			
Accomplishments/Planned Programs Subtotals	75.000	50.000	39.400

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 0303430K, O&M: <i>Background Investigation Information Technology Systems</i>	20.000	50.000	148.873	-	148.873	119.293	119.326	121.994	124.818	Continuing	Continuing

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>
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D. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											

E. Acquisition Strategy

The NBIS program has assessed market solutions, built out capability solutions, and reduced technical risk through a series of component-level prototype and pilot efforts. The NBIS PMO will leverage the lessons learned from these prototype and pilot efforts and incorporate into the system-level build and integration of the NBIS prototype. Specifically, lessons learned from the ICM prototype will be incorporated into the ICM RFP to leverage Industry's customized Commercial-off-the-Shelf (COTS) solutions. The ICM & Integration Request for Information (RFI) and Request for White Papers (RWP) is projected to be released in 4th Quarter FY 2017 and the RFP in 1st Quarter FY 2018.

F. Performance Metrics

Processing Capacity:

Threshold: System shall have the capability to process 2 million cases per year.
Objective: System shall have the capability to process 3 million cases per year.

FY 2017 Planned: N/A
FY 2018 Planned: N/A
FY 2019 Estimated: 1 thousand cases (IOC)

Availability:
Threshold: System shall have a continuous availability target of 99.9%
Objective: System shall have a continuous availability target of 99.99%

FY 2017 Planned: N/A
FY 2018 Planned: N/A
FY 2019 Estimated: 99.9%

Security:
Threshold: System shall operate within the Federal Information Security Management Act (FISMA) standards for a High, High, Moderate system with low and/or moderate vulnerabilities.
Objective: System shall operate within the FISMA standards for a High, High, Moderate system with low vulnerabilities.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>	
FY 2017 Planned: N/A FY 2018 Planned: N/A FY 2019 Estimated: High, High, Moderate system with low and or medium vulnerabilities.		

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>	Project (Number/Name) KA1 / <i>Federal Investigative Services Information Technology</i>
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TBD																												
IOC Application Development																												
IOC Testing																												
IOC Implementation																												
FOC Development																												
FOC Testing																												
FOC Implementation																												
Post Deployment Improvement - scheduled Releases																												
Post Deployment Improvement - scheduled Releases																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>	Project (Number/Name) KA1 / <i>Federal Investigative Services Information Technology</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
TBD				
IOC Application Development	2	2017	3	2018
IOC Testing	3	2017	3	2020
IOC Implementation	4	2017	4	2020
FOC Development	4	2017	2	2019
FOC Testing	2	2017	4	2019
FOC Implementation	4	2017	4	2019
Post Deployment Improvement - scheduled Releases				
Post Deployment Improvement - scheduled Releases	1	2020	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	45.353	0.657	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
NS01: <i>Teleport Generation 1/2</i>	45.353	0.657	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Department of Defense (DoD) Teleport system is a satellite communications (SATCOM) gateway that links the deployed warfighter to the Global Information Grid. The DoD Teleport program has fielded system capabilities incrementally using a multi-generational approach with Generation 1 and 2 Full Deployment authorized by DoD Chief Information Officer on February 18, 2011. DoD Teleport Generation 3 consists of three phases; Phases 1 and 2 are in Production and Deployment while Phase 3 is in Engineering and Manufacturing Development. Each DoD Teleport investment increases the warfighter's ability to communicate with a world-wide, net-centric set of information capabilities, which is vital for the DoD to maintain a persistent presence among its adversaries.

Currently, the Teleport system operates as an upgrade of SATCOM capabilities at selected DoD SATCOM gateways. This system provides deployed warfighters with seamless worldwide multi-band SATCOM connectivity to the Defense Information System Network (DISN) Service Delivery Nodes and legacy tactical command, control, communications, computers, and intelligence systems. It also provides centralized integration capabilities, contingency capacity, and common interfaces to access the DISN.

DoD Teleport's goal is to provide secure, seamless, interoperable, and economical upgrades to DoD SATCOM Gateways and meet the growing throughput requirements of the deployed warfighter.

The primary beneficiaries of the DoD Teleport investment are the DoD Combatant Commanders, Military Departments, Defense Agencies, and the warfighter. DoD Teleport Generation 3 is designed to meet the growing demands of the warfighter through the execution of the following phases:

Phase 1: Gateway Advanced Extremely High Frequency [Extended Data Rate] terminals provides tactical users with a 350% bandwidth increase in survivable, antijam communications through all peacetime and combat operations by installing Navy Multiband Terminals (NMT) at select Teleport sites. In addition to enhanced throughput, the NMT maintains compatibility with legacy waveforms and current tactical terminals.

Phase 2: Gateway Wideband Global SATCOM X/Ka-band terminals provide enhanced Wideband Global System (WGS) X/Ka capability to warfighters worldwide by installing terminals from the Modernization of Enterprise Terminal (MET) program at DoD Teleport and other gateway sites. This gateway enhancement allows Teleport to replace end-of-life Defense Satellite Communications System (DSCS) terminals while remaining interoperable with tactical WGS X/Ka-band users. The MET enhancement provides a 300% Ka-band capacity increase and an 1100% X-band capacity increase to current enterprise terminal X/Ka capabilities. Additionally, it enables the DoD Teleport system to maintain operational availability consistent with Generation 2 requirements and reduce the overall life-cycle cost of X/Ka capabilities across the DoD.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>
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Phase 3: Mobile User Objective System (MUOS) to Legacy Ultra High Frequency (UHF) systems interoperability will provide interoperability between MUOS users and legacy UHF users by installing MUOS-to-Legacy UHF SATCOM Gateway Component (MLGC) suites of equipment at DoD Teleport sites. MUOS is the next generation DoD UHF SATCOM system that will provide the warfighter with modern worldwide mobile communication services, utilizing the Wideband Code Division Multiple Access waveform for use in the military UHF SATCOM band. MLGC suites will provide critical continuity and interoperability as DoD tactical satellite users transition from legacy waveforms and radios to the Joint Tactical Radio System.

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.657	0.000	0.000	-	0.000
Current President's Budget	0.657	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>				Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
NS01: <i>Teleport Generation 1/2</i>	45.353	0.657	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Teleport program will implement an integrated test approach that will combine the objectives from multiple testing disciplines (e.g., developmental test, operational test, interoperability, and information assurance) throughout the testing lifecycle to support needed system evaluations. The Teleport program executes its own test events to achieve this integrated approach, but will partner with each phase's respective program office generated test activities to leverage the data needed to satisfy Teleport program test objectives. An approach summary for Teleport Gen 1/2 follows:

Generation 1/2 Technology Refresh/Technology Insertion: Funding will be used to maintain the Joint Interoperability Certification of the DoD Teleport System as the system is upgraded and refreshed with new components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Teleport Program	0.657	0.000	0.000
FY 2018 Plans: The decrease of -\$0.657 from FY 2017 to FY 2018 is attributed to the funding be moved to a new program element for Teleport.			
FY 2019 Plans: N/A			
FY 2018 to FY 2019 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	0.657	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• O&M, DW/ PE0303610K: <i>O&M, DW</i>	2.272	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Procurement, DW/ PE0303610K: <i>Procurement, DW</i>	37.512	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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D. Acquisition Strategy

The Teleport Program Office (TPO) uses the DoD preferred evolutionary acquisition approach to acquire Commercial off the Shelf (COTS) and modified COTS equipment when possible. The three TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems, the Space and Naval Warfare Systems Command, and Defense Information Technology Contracting Organization (DITCO) provide direct contracting support. Assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request for both organic and contracted support. The TPO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. Performance is evaluated thorough post-award contract reviews, performance assessment during quarterly program reviews. The MLGC program will use various contract types to employ the vendor best suited to deliver the program’s capabilities to the warfighter.

E. Performance Metrics

Teleport Cost and Schedule Performance Metrics:

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

Teleport Program Metrics:

RDT&E funds will be used to maintain an interoperability certification of the fielded DoD Teleport system in light of required/desired system changes. These changes are certified in standalone test events or as part of DoD Interoperability Communications Exercises (DICE). Percentage will be computed by dividing the number of changes under test by the number deemed DoD Interoperable.

Performance metrics have been established in four measurement areas: 1) customer results, 2) mission and business results, 3) processes and activities, and 4) technology. Specific measurement indicators and units of measure vary by measurement area, and metrics in each of the aforementioned areas are measured annually. Teleport will use the same measurement areas for performance metrics in FY 2016, FY 2017 and FY 2018.

Generation 1/2 Metric:

Percentage of system changes resulting in interoperability certification

FY 2016 Actual: 100%
FY 2017 Target: 100%

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Testing Support Services (TECH Refresh)	MIPR	JITC : Ft Huachuca	45.353	0.657		-		-		-		-	Continuing	Continuing	-
Subtotal			45.353	0.657		-		-		-		-	Continuing	Continuing	N/A

			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			45.353	0.657		0.000		-		-		-	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Teleport Program</i>	
Generation Three - Phase 3 FDD MUOS - Legacy	■

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Teleport Program</i>				
Generation Three - Phase 3 FDD MUOS - Legacy	3	2017	3	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	16.967	1.553	1.686	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
XXX: <i>Cybersecurity Initiative</i>	16.967	1.553	1.686	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Classified

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	1.553	1.686	1.862	-	1.862
Current President's Budget	1.553	1.686	0.000	-	0.000
Total Adjustments	0.000	0.000	-1.862	-	-1.862
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-1.862	-	-1.862

Change Summary Explanation

The decrease of -\$1.862 in FY 2019 is due a realignment within RDT&E to PE0303140K.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>				Project (Number/Name) XXX / <i>Cybersecurity Initiative</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
XXX: <i>Cybersecurity Initiative</i>	16.967	1.553	1.686	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Classified

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Cyber Security Range	1.553	1.686	-
FY 2018 Plans: Classified			
FY 2018 to FY 2019 Increase/Decrease Statement: Classified			
Accomplishments/Planned Programs Subtotals	1.553	1.686	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

Classified

D. Acquisition Strategy

Classified

E. Performance Metrics

Classified

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>	Project (Number/Name) XXX / <i>Cybersecurity Initiative</i>
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Classified	
Classified	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>	Project (Number/Name) XXX / <i>Cybersecurity Initiative</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Classified				
Classified	4	2017	3	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	50.138	3.030	3.049	2.970	-	2.970	2.981	3.050	3.112	3.174	Continuing	Continuing
NF1: <i>Distributed Common Ground/Surface Systems</i>	50.138	3.030	3.049	2.970	-	2.970	2.981	3.050	3.112	3.174	Continuing	Continuing

A. Mission Description and Budget Item Justification

As the sole joint interoperability certification agent, the Joint Interoperability Test Command (JITC) established and maintains a Distributed Development and Test Enterprise (T&E) for the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) program, as directed by the Office of the Under Secretary of Defense Intelligence (OUSDI). DCGS is an integral and critical component of the overall DoD Intelligence, Surveillance, and Reconnaissance interoperability and data integration strategy which provides world-wide capabilities to receive, process, exploit, and disseminate data from airborne and national reconnaissance sensors/platforms and commercial sources.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.030	3.049	3.056	-	3.056
Current President's Budget	3.030	3.049	2.970	-	2.970
Total Adjustments	0.000	0.000	-0.086	-	-0.086
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.086	-	-0.086

Change Summary Explanation

A decrease of -\$0.086 in FY 2019 is attributed to reduction in the number of planned assessments from nine (9) to eight (8).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>			Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
NF1: <i>Distributed Common Ground/Surface Systems</i>	50.138	3.030	3.049	2.970	-	2.970	2.981	3.050	3.112	3.174	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Interoperability Test Command (JITC) coordinates with the Military Services and Defense Intelligence Agencies to conduct Joint/Distributed Common Ground/Surface System (DCGS) testing and analysis, including event coordination, configuration, instrumentation and integration functions on the Distributed Development and Test Enterprise (DDTE). Under the DCGS Governance, this effort, referred to as the DCGS Test and Evaluation (T&E) Focus Team (FT), is composed of three parts: the DDTE Focus Group, providing and sustaining a distributed development network; the Strategy Focus Group, looking at current and future net-enabled enterprise T&E methods; and the Execution Focus Group, which leverages the Strategy Focus Group's methodologies in executing DCGS Enterprise assessment events, such as the annual DCGS demonstration, ENTERPRISE CHALLENGE. These efforts improve systems engineering and T&E throughout all phases of the DCGS life-cycle, resulting in improved capabilities to share net-centric data and services between the DCGS Programs of Record (PoRs) and the overarching Defense Intelligence Information Enterprise (DI2E).

Operates and maintains the DDTE, providing DCGS PoRs a virtual, operationally-relevant assessment environment maintaining connectivity between Service facilities, National Agency capabilities, and Coalition partners. DDTE allows robust integration of modeling and simulation T&E capabilities across Joint DCGS events without introducing vulnerabilities to operational Command and Control networks and has enabled improvements in systems engineering, instrumentation and T&E throughout all phases of the DCGS life cycle.

DCGS PoRs and Coalition partners use the DDTE network, which supports the net-centric maturity assessment of the DCGS Enterprise under the DCGS Governance, to integrate architecture, standards, and capabilities for implementation of the DCGS Integration Backbone and support the migration to net-centricity, including DCGS Enterprise services for the Military Departments, DCGS-Special Operations Forces and the DCGS Intelligence Community. National Agency capabilities supporting DCGS include Geospatial Intelligence, Signals Intelligence, Measurement and Signature Intelligence and Human Intelligence, which are integrated and tested in the DDTE domain.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Distributed Common Ground/Surface Systems (DCGS)	3.030	3.049	2.970
FY 2018 Plans:			
Continue to support DDTE, provide enhanced functionality, expand T&E capability, and perform automated evaluations of net-centric capabilities with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and "big data"; the number of active DDTE nodes is expected to increase as the DCGS PoRs participate in assessment venues with other DI2E entities. Continue to conduct compliance testing of data, metadata, and web			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>services against established standards to enhance the sharing and promote reuse of net centric solutions. Continuing to expand TaaS capabilities that enable DCGS entities and other Communities of Interest (COI) to test for standards compliance during the development and acquisition processes. Continue enhancement of instrumentation and automated data collection tools to support testing on multiple network domains and enclaves where the DCGS PoRs, National Agencies and Coalition Partners test and operate. Plan and conduct testing of enterprise cybersecurity solutions to determine if they comply with standards, support interoperability between the DCGS PoRs, and meet the DCGS Enterprise cybersecurity requirements. Data collected by these assessment efforts are reflected in an annual DCGS Enterprise Assessment Report that delineates how well the DCGS Enterprise shows progress over time in meeting the capabilities and closing the gaps reflected in the 2016 DCGS Enterprise Initial Capabilities Document.</p> <p>The increase of +\$0.019 in FY 2018 will provide for the implementation of enhanced data analytics for DCGS. This increase is partially offset by a decrease of -\$0.114 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p> <p>FY 2019 Plans: Continue to revise and evolve T&E data collection techniques and analysis strategies in support of DCGS Enterprise community members acquisition programs' interoperability as they integrate capabilities and services solutions to address the operational gaps identified in the OUDS(I) sponsored Distributed Common Ground/Surface System Enterprise Capabilities Based Assessment. Continue to plan, develop and execute enterprise-level data collection during multiple yearly test events. Continue to support DDTE, provide enhanced functionality, expand T&E capability, and perform automated evaluations of net-centric capabilities with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and "big data". Continue enhancement of instrumentation and automated data collection tools to support testing on multiple network domains and enclaves where the DCGS PoRs, National Agencies and Coalition Partners test and operate. Continue to develop T&E methodology and tools to support testing of enterprise cybersecurity solutions to determine if they comply with standards, support interoperability between the DCGS PoRs, and meet the DCGS Enterprise cybersecurity requirements. Continue to conduct compliance testing of data, metadata, and web services against established standards to enhance the sharing and promote reuse of net centric solutions. Continuing to expand TaaS capabilities that enable DCGS entities and other COIs to test for standards compliance during the development and acquisition processes. All data collected by these assessment efforts are reflected in an annual DCGS Enterprise Assessment Report that delineates how well the DCGS Enterprise shows progress over time in meeting the capabilities and closing the gaps reflected in the 2016 DCGS Enterprise Initial Capabilities Document.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
A decrease of -\$0.079 from FY2018 to FY 2019 is attributed to reduction in the number of planned assessments performed from nine (9) to eight (8).			
Accomplishments/Planned Programs Subtotals	3.030	3.049	2.970

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

A T&E Mission Support Services (MSS) cost plus fixed fee contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions.

E. Performance Metrics

The DCGS T&E FT performs a minimum of six DCGS Enterprise assessments per year, and the results are consolidated into the T&E FT Enterprise Assessment Report annually. The T&E FT also provides input to the DCGS Enterprise Focus Team's State of the Enterprise (SoE) Report, which includes the Enterprise Maturity Model (EMM) and shows measurable DCGS Enterprise net-centric maturity progress over time.

The T&E FT also leverages Joint Interoperability Certification testing to support the evaluation of DCGS Enterprise maturity. In FY 2016, T&E FT performed twelve (12) DCGS Enterprise assessments. This trend is expected to continue in FY2017. Of the six DCGS PoR systems, two hold current Joint Staff (JS), Command, Control, Communications, & Computers/Cyber (J6) Interoperability (IOP) Certifications and continue to conduct IOP testing on emerging releases. One DCGS PoR has completed interoperability testing, and the joint IOP certification is pending. Of the three remaining PoRs, two are not required to be JS J6 certified, but the T&E FT leverages data collected during periodic IOP assessments of these programs during enterprise-level demonstrations and test events. Due to increased automation for data collection, parsing and analysis, in addition to advances in PoR and Enterprise maturity, the T&E FT increases the cumulative number of net-centric capability evaluations each year.

In FY 2017, T&E FT performed a minimum of ten (10) DCGS Enterprise assessments.

In FY 2018, T&E FT will perform a minimum of nine (9) DCGS Enterprise assessments.

1. Metric: Support 10 DCGS Enterprise Assessments per FY

Measure/Goal: 10

FY19 Target: 10

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
In-House Contracts	MIPR	TBD : TBD	20.963	1.000	Oct 2017	1.000	Oct 2017	1.000	Oct 2018	-		1.000	Continuing	Continuing	Continuing
Subtotal			20.963	1.000		1.000		1.000		-		1.000	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering & Technical Services 1	C/T&M	Interop : Ft Huachuca	3.763	-		-		-		-		-	0.000	3.763	3.763
Engineering & Technical Services 2	C/T&M	NGMS : Ft Huachuca	12.927	-		-		-		-		-	0.000	12.927	12.927
Engineering & Technical Services 3	C/T&M	NGIT : Ft Huachuca	3.612	-		-		-		-		-	0.000	3.612	3.612
Engineering & Technical Services 4	C/Various	Various : Various	1.552	0.291		0.330	May 2017	-		-		-	0.000	2.173	2.173
Engineering & Technical Services 5	C/CPFF	TASC : Andover, Ma	7.321	1.739		0.917	May 2017	-		-		-	0.000	9.977	9.977
Engineering & Technical Services 6	MIPR	TBD : TBD	-	-		0.802		1.970	Dec 2018	-		1.970	Continuing	Continuing	Continuing
Subtotal			29.175	2.030		2.049		1.970		-		1.970	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
	Project Cost Totals		50.138	3.030	3.049	2.970	-	2.970	Continuing	Continuing

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

DCGS	
DCGS T&E IPT	
Connectivity to Other Testbeds & Test Event Conduct	
DDT&E Operation and Maintenance Support	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DCGS				
DCGS T&E IPT	1	2017	4	2023
Connectivity to Other Testbeds & Test Event Conduct	1	2017	4	2023
DDT&E Operation and Maintenance Support	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0708012K / Logistics Support Activities
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	1.317	-	1.317	1.361	1.406	1.451	1.460	Continuing	Continuing
LSA: Logistics Support Activities	-	0.000	0.000	1.317	-	1.317	1.361	1.406	1.451	1.460	Continuing	Continuing

Note

N/A

A. Mission Description and Budget Item Justification

Classified

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	1.317	-	1.317
Total Adjustments	0.000	0.000	1.317	-	1.317
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	1.317	-	1.317

Change Summary Explanation

The increase of +\$1.317 in FY 2019 is classified and is provided under separate cover.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708012K / Logistics Support Activities				Project (Number/Name) LSA / Logistics Support Activities			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
LSA: Logistics Support Activities	-	0.000	0.000	1.317	-	1.317	1.361	1.406	1.451	1.460	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Classified.

A. Mission Description and Budget Item Justification

Classified.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: LSA	-	-	1.317
Description: Classified.			
FY 2019 Plans: Classified.			
FY 2018 to FY 2019 Increase/Decrease Statement: Classified.			
Accomplishments/Planned Programs Subtotals	-	-	1.317

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

Classified.

D. Acquisition Strategy

Classified.

E. Performance Metrics

Classified.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012K / <i>Logistics Support Activities</i>	Project (Number/Name) LSA / <i>Logistics Support Activities</i>
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Classified</i>	
Classified	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012K / <i>Logistics Support Activities</i>	Project (Number/Name) LSA / <i>Logistics Support Activities</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Classified				
Classified	1	2019	3	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.642	2.323	-	2.323	2.308	2.391	2.424	2.437	Continuing	Continuing
NS01: <i>Teleport Generation 1/2</i>	0.000	0.000	0.642	2.323	-	2.323	2.308	2.391	2.424	2.437	Continuing	Continuing

A. Mission Description and Budget Item Justification

Department of Defense (DoD) Teleport system is a satellite communications (SATCOM) gateway that links the deployed warfighter to the Global Information Grid. The DoD Teleport program has fielded system capabilities incrementally using a multi-generational approach with Generation 1 and 2 Full Deployment authorized by DoD Chief Information Officer on February 18, 2011. DoD Teleport Generation 3 consists of three phases; Phases 1 and 2 are in Production and Deployment while Phase 3 is in Engineering and Manufacturing Development. Each DoD Teleport investment increases the warfighter's ability to communicate with a world-wide, net-centric set of information capabilities, which is vital for the DoD to maintain a persistent presence among its adversaries.

Currently, the Teleport system operates as an upgrade of SATCOM capabilities at selected DoD SATCOM gateways. This system provides deployed warfighters with seamless worldwide multi-band SATCOM connectivity to the Defense Information System Network (DISN) Service Delivery Nodes and legacy tactical command, control, communications, computers, and intelligence systems. It also provides centralized integration capabilities, contingency capacity, and common interfaces to access the DISN.

DoD Teleport's goal is to provide secure, seamless, interoperable, and economical upgrades to DoD SATCOM Gateways and meet the growing throughput requirements of the deployed warfighter.

The primary beneficiaries of the DoD Teleport investment are the DoD Combatant Commanders, Military Departments, Defense Agencies, and the warfighter. DoD Teleport Generation 3 is designed to meet the growing demands of the warfighter through the execution of the following phases:

Phase 1: Gateway Advanced Extremely High Frequency [Extended Data Rate] terminals provides tactical users with a 350% bandwidth increase in survivable, antijam communications through all peacetime and combat operations by installing Navy Multiband Terminals (NMT) at select Teleport sites. In addition to enhanced throughput, the NMT maintains compatibility with legacy waveforms and current tactical terminals.

Phase 2: Gateway Wideband Global SATCOM X/Ka-band terminals provide enhanced Wideband Global System (WGS) X/Ka capability to warfighters worldwide by installing terminals from the Modernization of Enterprise Terminal (MET) program at DoD Teleport and other gateway sites. This gateway enhancement allows Teleport to replace end-of-life Defense Satellite Communications System (DSCS) terminals while remaining interoperable with tactical WGS X/Ka-band users. The MET enhancement provides a 300% Ka-band capacity increase and an 1100% X-band capacity increase to current enterprise terminal X/Ka capabilities. Additionally, it enables the DoD Teleport system to maintain operational availability consistent with Generation 2 requirements and reduce the overall life-cycle cost of X/Ka capabilities across the DoD.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>
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Phase 3: Mobile User Objective System (MUOS) to Legacy Ultra High Frequency (UHF) systems interoperability will provide interoperability between MUOS users and legacy UHF users by installing MUOS-to-Legacy UHF SATCOM Gateway Component (MLGC) suites of equipment at DoD Teleport sites. MUOS is the next generation DoD UHF SATCOM system that will provide the warfighter with modern worldwide mobile communication services, utilizing the Wideband Code Division Multiple Access waveform for use in the military UHF SATCOM band. MLGC suites will provide critical continuity and interoperability as DoD tactical satellite users transition from legacy waveforms and radios to the Joint Tactical Radio System.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.642	2.334	-	2.334
Current President's Budget	0.000	0.642	2.323	-	2.323
Total Adjustments	0.000	0.000	-0.011	-	-0.011
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.011	-	-0.011

Change Summary Explanation

The decrease of \$-0.011 in FY 2019 is attributed to reduced requirements for engineering support during system testing and changes to software.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>				Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
NS01: <i>Teleport Generation 1/2</i>	0.000	0.000	0.642	2.323	-	2.323	2.308	2.391	2.424	2.437	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Teleport program will implement an integrated test approach that will combine the objectives from multiple testing disciplines (e.g., developmental test, operational test, interoperability, and information assurance) throughout the testing lifecycle to support needed system evaluations. The Teleport program executes its own test events to achieve this integrated approach, but will partner with each phase's respective program office generated test activities to leverage the data needed to satisfy Teleport program test objectives. An approach summary for Teleport Gen 1/2 follows:

Generation 1/2 Technology Refresh/Technology Insertion: Funding will be used to maintain the Joint Interoperability Certification of the DoD Teleport System as the system is upgraded and refreshed with new components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Teleport Program	0.000	0.642	2.323	-	2.323
Description: N/A					
FY 2018 Plans: Funding will be used to support the Joint Interoperability Certification of the DoD Teleport System.					
The increase of +\$0.642 from FY 2017 to FY 2018 is attributed to the funding be moved from program element 0303610K for Teleport.					
FY 2019 Base Plans: Funding will be used to maintain the Joint Interoperability Certification of the DoD Teleport System as the system is upgraded with new components.					
FY 2018 to FY 2019 Increase/Decrease Statement: The increase +\$1.681 from FY 2018 to FY 2019 is attributed to an increase in the level of effort to plan and test upgrades to the DoD Teleport System's aging and end-of-life components.					
Accomplishments/Planned Programs Subtotals	0.000	0.642	2.323	-	2.323

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
--	---	---

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M, DW/ PE0303610K: <i>O&M, DW</i>	0.000	27.647	21.299	10.300	31.599	23.585	24.456	24.777	24.046	Continuing	Continuing
• Procurement, DW/ PE0303610K: <i>Procurement, DW</i>	0.000	46.638	34.071	3.800	37.871	24.242	25.550	25.858	26.675	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Teleport Program Office (TPO) uses the DoD preferred evolutionary acquisition approach to acquire Commercial off the Shelf (COTS) and modified COTS equipment when possible. The three TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems, the Space and Naval Warfare Systems Command, and Defense Information Technology Contracting Organization (DITCO) provide direct contracting support. Assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request for both organic and contracted support. The TPO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. Performance is evaluated thorough post-award contract reviews, performance assessment during quarterly program reviews. The MLGC program will use various contract types to employ the vendor best suited to deliver the program’s capabilities to the warfighter.

E. Performance Metrics

Teleport Cost and Schedule Performance Metrics:

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

Teleport Program Metrics:

RDT&E funds will be used to maintain an interoperability certification of the fielded DoD Teleport system in light of required/desired system changes. These changes are certified in standalone test events or as part of DoD Interoperability Communications Exercises (DICE). Percentage will be computed by dividing the number of changes under test by the number deemed DoD Interoperable.

Performance metrics have been established in four measurement areas: 1) customer results, 2) mission and business results, 3) processes and activities, and 4) technology. Specific measurement indicators and units of measure vary by measurement area, and metrics in each of the aforementioned areas are measured annually. Teleport will use the same measurement areas for performance metrics in FY 2016, FY 2017 and FY 2018.

Generation 1/2 Metric:

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 7	PE 1203610K / <i>Teleport Program</i>	NS01 / <i>Teleport Generation 1/2</i>

Percentage of system changes resulting in interoperability certification

FY 2017 Actual: 100%

FY 2018 Target: 100%

FY 2019 Target: 100%

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
--	---	---

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Technical & Design Services (GDS)	Various	SSC Atlantic : Various	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical & Design Services (MLGC)	Various	Various Locations : Various	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Services	C/CPFF	STF Ltd. : Fredericksburg, VA	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Services	IA	SPAWAR Atlantic : Charleston, SC	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical & Design Services (MVG)	IA	SSC Atlantic:Various : Various	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical & Design Services (Digital IF)	IA	CERDEC : TBD	0.000	-		-		-		-		-	0.000	0.000	0.000
Subtotal			0.000	-		-		-		-		-	0.000	0.000	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Office Support	C/FFP	BAH : McLean, VA	0.000	-		-		-		-		-	0.000	0.000	0.000
Program Office Support	SS/CPFF	SAIC : Falls Church, VA	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Program Office Support	C/CPAF	STF : Fredericksburg, VA	0.000	-		-		-		-		-	0.000	0.000	0.000
Program Office Support	IA	SPAWAR : Charleston, SC	0.000	-		-		-		-		-	0.000	0.000	0.000
Contractor Program Office Support	MIPR	SSC Atlantic, STF : Charleston, SC	0.000	-		-		-		-		-	0.000	0.000	0.000
Program Office Support	IA	CERDEC : Various	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical & Design Services	IA	PM DCATS : Ft. Belvoir, VA	0.000	-		-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
--	---	---

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Technical Support (Tech Refresh)	MIPR	CERDEC : APG	0.000	-		0.642	Oct 2017	2.323	Oct 2018	-		2.323	Continuing	Continuing	Continuing
Engineering Technical Support (Tech Refresh) 2	IA	PM DCATS : Ft. Belvoir, VA	0.000	-		-		-		-		-	0.000	0.000	0.000
Program Office Support	WR	PLD : TBD	0.000	-		-		-		-		-	0.000	0.000	0.000
Program Office Support Engineering	IA	JITC : Ft. HUA, AZ	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical Support (Spectral Warrior)	IA	NRL : NRL	0.000	-		-		-		-		-	0.000	0.000	0.000
Engineering Technical Support (NSSEG)	Various	SSC Atlantic : Various	0.000	-		-		-		-		-	0.000	0.000	0.000
Subtotal			0.000	-		0.642		2.323		-		2.323	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Testing Support Services (Tech Refresh)	MIPR	JITC : Ft. Huachuca	0.000	-		-		-		-		-	0.000	0.000	0.000
Subtotal			0.000	-		-		-		-		-	0.000	0.000	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	0.642	2.323	-	2.323	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Teleport Program</i>	
Integrated testing that supported Teleport system evaluation and Technology Refresh/ Technology Insertion	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Information Systems Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Teleport Program</i>				
Integrated testing that supported Teleport system evaluation and Technology Refresh/ Technology Insertion	1	2017	4	2023

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Defense Logistics Agency

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Defense Logistics Agency • Budget Estimates FY 2019 • RDT&E Program

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018	FY 2018	FY 2018	FY 2018
		PB Request with CR Adj Base	Total PB Requests* with CR Adj Base	PB Request with CR Adj OCO	Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	189,190	319,796	319,796		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation	FY 2018 Less Enacted		FY 2018	FY 2018 Less Enacted		FY 2018
	FY 2018 Emergency Requests**	Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	PB Requests* with CR Adj Base + OCO + Emergency**	DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW				319,796		319,796
Total Research, Development, Test & Evaluation				319,796		319,796

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

02 Feb 2018

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	273,011		273,011
Total Research, Development, Test & Evaluation	273,011		273,011

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Technology Development	129,264	270,925	270,925		
System Development And Demonstration	35,623	44,177	44,177		
Management Support	4,554				
Operational System Development	19,749	4,694	4,694		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	169,441	315,102	315,102		
Central Supply and Maintenance	19,749	4,694	4,694		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

02 Feb 2018

	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
Advanced Technology Development			270,925		270,925
System Development And Demonstration			44,177		44,177
Management Support					
Operational System Development			4,694		4,694
Total Research, Development, Test & Evaluation			319,796		319,796
<u>Summary Recap of FYDP Programs</u>					
Research and Development			315,102		315,102
Central Supply and Maintenance			4,694		4,694
Total Research, Development, Test & Evaluation			319,796		319,796

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

02 Feb 2018

	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Summary Recap of Budget Activities -----			
Advanced Technology Development	230,376		230,376
System Development And Demonstration	35,060		35,060
Management Support	4,000		4,000
Operational System Development	3,575		3,575
Total Research, Development, Test & Evaluation	273,011		273,011
Summary Recap of FYDP Programs -----			
Research and Development	269,436		269,436
Central Supply and Maintenance	3,575		3,575
Total Research, Development, Test & Evaluation	273,011		273,011

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 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Technology Development	129,264	270,925	270,925		
System Development And Demonstration	35,623	44,177	44,177		
Management Support	4,554				
Operational System Development	19,749	4,694	4,694		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	169,441	315,102	315,102		
Central Supply and Maintenance	19,749	4,694	4,694		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		

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02 Feb 2018

	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Advanced Technology Development				270,925		270,925
System Development And Demonstration				44,177		44,177
Management Support						
Operational System Development				4,694		4,694
Total Research, Development, Test & Evaluation				319,796		319,796
<u>Summary Recap of FYDP Programs</u>						
Research and Development				315,102		315,102
Central Supply and Maintenance				4,694		4,694
Total Research, Development, Test & Evaluation				319,796		319,796

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 (Dollars in Thousands)

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Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Advanced Technology Development	230,376		230,376
System Development And Demonstration	35,060		35,060
Management Support	4,000		4,000
Operational System Development	3,575		3,575
Total Research, Development, Test & Evaluation	273,011		273,011
 Summary Recap of FYDP Programs -----			
Research and Development	269,436		269,436
Central Supply and Maintenance	3,575		3,575
Total Research, Development, Test & Evaluation	273,011		273,011

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 Total Obligational Authority
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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Defense Logistics Agency	189,190	319,796	319,796		
Total Research, Development, Test & Evaluation	189,190	319,796	319,796		

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 Exhibit R-1 FY 2019 President's Budget
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 (Dollars in Thousands)

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Appropriation -----	FY 2018		FY 2018		FY 2018	
	FY 2018 Emergency Requests** Emergency	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Defense Logistics Agency				319,796		319,796
Total Research, Development, Test & Evaluation				319,796		319,796

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(Dollars in Thousands)

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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Defense Logistics Agency	273,011		273,011
Total Research, Development, Test & Evaluation	273,011		273,011

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 Exhibit R-1 FY 2019 President's Budget
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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
48	0603680S	Manufacturing Technology Program	03	19,736	40,511	40,511			U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	14,541	10,611	10,611			U
51	0603713S	Deployment and Distribution Enterprise Technology	03	6,618					U
53	0603720S	Microelectronics Technology Development and Support	03	88,369	219,803	219,803			U
		Advanced Technology Development		129,264	270,925	270,925			
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,661	6,266	6,266			U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	27,194	24,436	24,436			U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,768	13,475	13,475			U
		System Development And Demonstration		35,623	44,177	44,177			
157	0605502S	Small Business Innovative Research	06	4,554					U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06						U
		Management Support		4,554					
241	0708011S	Industrial Preparedness	07	15,984					U
243	0708012S	Pacific Disaster Centers	07	1,690	1,770	1,770			U

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S e c
48	0603680S	Manufacturing Technology Program	03				40,511		40,511	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03				10,611		10,611	U
51	0603713S	Deployment and Distribution Enterprise Technology	03							U
53	0603720S	Microelectronics Technology Development and Support	03				219,803		219,803	U
Advanced Technology Development							270,925		270,925	
127	0605070S	DOD Enterprise Systems Development and Demonstration	05				6,266		6,266	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05				24,436		24,436	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05				13,475		13,475	U
System Development And Demonstration							44,177		44,177	
157	0605502S	Small Business Innovative Research	06							U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06							U
Management Support										
241	0708011S	Industrial Preparedness	07							U
243	0708012S	Pacific Disaster Centers	07				1,770		1,770	U

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
48	0603680S	Manufacturing Technology Program	03	49,667		49,667	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,778		11,778	U
51	0603713S	Deployment and Distribution Enterprise Technology	03				U
53	0603720S	Microelectronics Technology Development and Support	03	168,931		168,931	U
		Advanced Technology Development		230,376		230,376	
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,173		3,173	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	21,156		21,156	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	10,731		10,731	U
		System Development And Demonstration		35,060		35,060	
157	0605502S	Small Business Innovative Research	06				U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06	4,000		4,000	U
		Management Support		4,000		4,000	
241	0708011S	Industrial Preparedness	07				U
243	0708012S	Pacific Disaster Centers	07	1,770		1,770	U

R-119PB: FY 2019 President's Budget (Published Version), as of February 2, 2018 at 12:42:22

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Defense-Wide
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
244	0708047S	Defense Property Accountability System	07	2,075	2,924	2,924			U
		Operational System Development		19,749	4,694	4,694			
Total Research, Development, Test & Eval, DW				189,190	319,796	319,796			

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018		FY 2018 Remaining Req	FY 2018		FY 2018 Remaining Req	S
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		
244	0708047S	Defense Property Accountability System	07					2,924		2,924 U
		Operational System Development						4,694		4,694
Total Research, Development, Test & Eval, DW								319,796		319,796

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
244	0708047S	Defense Property Accountability System	07	1,805		1,805	U
		Operational System Development		3,575		3,575	
Total Research, Development, Test & Eval, DW				273,011		273,011	

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Defense Logistics Agency
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

02 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
48	0603680S	Manufacturing Technology Program	03	19,736	40,511	40,511			U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	14,541	10,611	10,611			U
51	0603713S	Deployment and Distribution Enterprise Technology	03	6,618					U
53	0603720S	Microelectronics Technology Development and Support	03	88,369	219,803	219,803			U
Advanced Technology Development				129,264	270,925	270,925			
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,661	6,266	6,266			U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	27,194	24,436	24,436			U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,768	13,475	13,475			U
System Development And Demonstration				35,623	44,177	44,177			
157	0605502S	Small Business Innovative Research	06	4,554					U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06						U
Management Support				4,554					
241	0708011S	Industrial Preparedness	07	15,984					U
243	0708012S	Pacific Disaster Centers	07	1,690	1,770	1,770			U
244	0708047S	Defense Property Accountability System	07	2,075	2,924	2,924			U
Operational System Development				19,749	4,694	4,694			

R-119PB: FY 2019 President's Budget (Published Version), as of February 2, 2018 at 12:42:22

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Defense Logistics Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
48	0603680S	Manufacturing Technology Program	03				40,511		40,511	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03				10,611		10,611	U
51	0603713S	Deployment and Distribution Enterprise Technology	03							U
53	0603720S	Microelectronics Technology Development and Support	03				219,803		219,803	U
Advanced Technology Development							270,925		270,925	
127	0605070S	DOD Enterprise Systems Development and Demonstration	05				6,266		6,266	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05				24,436		24,436	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05				13,475		13,475	U
System Development And Demonstration							44,177		44,177	
157	0605502S	Small Business Innovative Research	06							U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06							U
Management Support										
241	0708011S	Industrial Preparedness	07							U
243	0708012S	Pacific Disaster Centers	07				1,770		1,770	U
244	0708047S	Defense Property Accountability System	07				2,924		2,924	U
Operational System Development							4,694		4,694	

R-119PB: FY 2019 President's Budget (Published Version), as of February 2, 2018 at 12:42:22

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Defense Logistics Agency
 FY 2019 President's Budget
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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
48	0603680S	Manufacturing Technology Program	03	49,667		49,667	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,778		11,778	U
51	0603713S	Deployment and Distribution Enterprise Technology	03				U
53	0603720S	Microelectronics Technology Development and Support	03	168,931		168,931	U
Advanced Technology Development				230,376		230,376	
127	0605070S	DOD Enterprise Systems Development and Demonstration	05	3,173		3,173	U
129	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	21,156		21,156	U
130	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	10,731		10,731	U
System Development And Demonstration				35,060		35,060	
157	0605502S	Small Business Innovative Research	06				U
170	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06	4,000		4,000	U
Management Support				4,000		4,000	
241	0708011S	Industrial Preparedness	07				U
243	0708012S	Pacific Disaster Centers	07	1,770		1,770	U
244	0708047S	Defense Property Accountability System	07	1,805		1,805	U
Operational System Development				3,575		3,575	

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Defense Logistics Agency
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Program Line Element No Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ S with CR Adj e OCO c
Total Defense Logistics Agency			189,190	319,796	319,796		

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Defense Logistics Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Total Defense Logistics Agency							319,796	319,796

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Defense Logistics Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Section
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Total Defense Logistics Agency				273,011		273,011	

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Defense Logistics Agency • Budget Estimates FY 2019 • RDT&E Program

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50	03	0603712S	Logistics Research and Development Technology (Log R&D).....	Volume 5 - 385
51	03	0603713S	Deployment and Distribution Enterprise Technology.....	Volume 5 - 395
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DoD Enterprise Systems Development and Demonstration	0605070S	127	05.....	Volume 5 - 411
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Logistics Research and Development Technology (Log R&D)	0603712S	50	03.....	Volume 5 - 385
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Microelectronics Technology Development and Support (DMEA)	0603720S	53	03.....	Volume 5 - 403
Pacific Disaster Centers	0708012S	243	07.....	Volume 5 - 451
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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>					PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	19.736	40.511	49.667	-	49.667	40.848	41.199	41.382	42.169	Continuing	Continuing
IBMP: <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	0.000	14.157	16.227	16.109	-	16.109	16.670	16.519	16.686	17.131	Continuing	Continuing
AAA: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	0.000	4.302	17.103	27.770	-	27.770	19.422	19.749	19.825	20.094	Continuing	Continuing
OOO: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	0.000	1.277	7.181	5.788	-	5.788	4.756	4.931	4.871	4.944	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) Manufacturing Technology (ManTech) Program funds the advanced technology development needed to achieve a responsive, efficient domestic industrial base that affordably meets the warfighters' needs in a timely manner. The ManTech program works with DLA's diverse supply chains to improve manufacturing capability throughout a product's life cycle. It provides the crucial link between invention and application by maturing, scaling up, and validating advanced manufacturing technology in "real world" environments. ManTech developments provide a path to low-risk technology implementation for the many small businesses and defense unique suppliers as well as depots and shipyards that are critical to DLA. By anticipating and addressing production and sustainment problems before they occur, readiness levels increase and sustainment costs are lower.

DLA ManTech is aligned into three Strategic Focus Areas (SFA): 1) Improving Industrial Base Manufacturing Processes; 2) Maintaining Viable Sources of Supply; and 3) Improving Technical and Logistics Information.

- The Improving Industrial Base Manufacturing Processes SFA includes efforts to reduce industrial base material costs and production lead-times, while improving the quality of DLA managed products. This SFA has supply chain focused execution portfolios for food (Subsistence Network Procurement), Castings (Procurement Readiness Optimization—Advanced Casting Technology), Forgings (Procurement Readiness Optimization—Forging Advance System Technology), Batteries (Battery Network) and Additive Manufacturing.
- Maintaining Viable Supply Sources includes efforts to assure the commercial industrial base can satisfy DLA materiel requirements without relying on foreign sources for microcircuits and critical strategic materials. This strategic focus area mitigates supply issues caused by the lack of a reliable domestic manufacturing capability to produce products or raw materials needed to build and maintain weapon systems. The major focus of the program is maintaining a reliable, trusted, domestic source for

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>
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“non-procurable” linear and digital microcircuits. Microcircuit emulation allows the Services to save significant costs by using form, fit and functionally equivalent spare parts rather than redesigning the next-higher-assembly.

• The Improving Technical and Logistics Information SFA include efforts to improve and facilitate the exchange of engineering and logistics information among DLA, the Military Services, DLA industry partners and DLA customers. It includes the Military Unique Sustainment Technology (MUST) and the Defense Logistics Information Research (DLIR) programs. A primary focus of this SFA is to capitalize on the emerging “Model Based Enterprise” paradigm and the semantic web as an enabler to a logistics system that is smart and connected up and down the supply chain and across all DLA Customers and suppliers. A major focus is to transform DoD engineering data from two-dimensional paper-based products to three-dimensional computer based models, and to develop processes to move from “electronic paper” (i.e. PDF files) to technical data files that can interface directly with industries’ engineering systems. The benefits include shorter product introduction cycles, lower set up-costs for parts production and more economical small batch production.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	31.259	40.511	50.098	-	50.098
Current President's Budget	19.736	40.511	49.667	-	49.667
Total Adjustments	-11.523	0.000	-0.431	-	-0.431
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	10.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-20.185	-			
• SBIR/STTR Transfer	-1.338	-			
• Inflation Adjustment	-	-	-0.431	-	-0.431

Change Summary Explanation

In FY2017, Manufacturing Technology received a Congressional Add for \$10M for the Casting program with emphasis on Steel Castings. Under the FY2017 CR, PE 30603680S was considered a new start so ManTech business was executed under 70708011S resulting in reprogramming amount of \$16.184M. The remaining reprogramming amount is a \$1.963M reprogramming to Generic Logistics R&D as well as the USTRANSCOM amount owed to ManTech in the amount of \$2.218M. Under the FY2017 CR, a portion of ManTech's funding was provided to USTRANSCOM to continue business operations. Upon enactment, the USTRANSCOM funding is being returned to ManTech. In FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$1.338M.

In FY2019, program increased for the development of electron beam manufacturing processes for microcircuits (+\$9.000M – to Maintaining Viable Supply Sources). Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>				Project (Number/Name) IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
IBMP: <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	0.000	14.157	16.227	16.109	-	16.109	16.670	16.519	16.686	17.131	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Improving Industrial Base Manufacturing Processes Strategic Focus Area (SFA) is an R&D effort undertaken with DLA's suppliers to reduce material costs, reduce the length and variability of production lead-times, assure DLA managed products meet performance requirements, and continuously improve quality and reliability. Benefits of this SFA include lower material costs, lower inventory levels and more predictable Customer Wait Times, fewer quality deficiencies, and lower customer support costs. This SFA includes within its scope the Subsistence Network, the Battery Network, the Castings/Forging programs and Additive Manufacturing programs.

The Battery Network (BATTNET) objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life, and lighter batteries with higher energy. BATTNET conducts R&D initiatives to address sustainment gaps and bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for specific groups of batteries. BATTNET also focuses on projects to develop the production capability for advanced lithium-based non-rechargeable and rechargeable batteries to ensure the prompt and sustained availability, quality, and affordability of Service approved batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolved obsolescence issues; addressed surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and leveraged Service-level (Army, Navy, Air Force) and other governmental (DOE, DOT, NASA) R&D efforts to insert new technology and practices into the existing DLA battery inventory.

The Subsistence Network (SUBNET) Program is the successor to the Combat Rations Network R&D program. SUBNET focuses on solutions to develop and promote manufacturing improvements in the subsistence supply chain. The program's expanded areas of interest include: combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense developments, garrison feeding, nutrition and health, storage and packing solutions, surge and sustainment support, and water security. SUBNET forms a community of practice with Military Services, U.S. Department of Agriculture, Natick Soldier Research Development, and Engineering Center; Academia, and Industry to research and promote manufacturing improvements in the Subsistence Supply Chain with the goals of maximizing capability and capacity to produce, and to encourage innovation and modernization needed to leverage the latest technologies. Desired outcomes include: reduced cost, increased efficiencies, enhanced quality, and improved surge demand capabilities.

The Casting program works to ensure a stable, reliable, and competitive domestic casting industrial base for the weapon system needs of the Department of Defense (DoD). Castings works with industry, universities, and the Casting Industry Associations to identify projects to improve the materials, processes and business practices of the nation's foundry industry. The program aligns its projects with strategic issues and focus areas within the DLA and DoD. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Cast parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered, up to 10% are castings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed, these capabilities will support the foundry industry,

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>

where these technologies will be tested and implemented, usually in conjunction with the industry associations. These advancements improve the metal casting supply chains for the DOD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.

The Forging program works to ensure a stable, reliable, and competitive domestic forging industrial base for the weapon system needs of the Department of Defense and the Defense Logistics Agency. Working with industry, universities, and the Forging Industry Association to identify projects to improve the materials, processes and business practices of the nation's forging industry. The program aligns its projects with strategic issues and focus areas within the DLA and DoD. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are ~2% of National Stock Number (NSN) Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered, up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where these technologies will be tested and implemented in conjunction with the industry associations. These advancements improve the forging supply chains for the DoD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DoD weapon systems.

The Additive Manufacturing (AM) objective is to establish AM as an effective alternative to conventional manufacturing and document the process for AM benefits. DLA is pursuing all AM technology as a lead-time and inventory reduction enabler. The AM effort pursues alternate means of supply for products that are otherwise non-procurable or susceptible to procurement issues due to an unresponsive manufacturing vendor base. The AM effort includes the identification of AM candidates among the population of products that are needed but hard to obtain, costly or have long manufacturing lead times. The AM effort requires management of 3D digital technical and manufacturing data. In addition, the AM effort includes the development of the processes that will tie the designers, engineers, maintainers, logisticians, procurement managers and the vendor base into a seamless AM procurement stream. Potential benefits include products that can address an unfulfilled Warfighter readiness need by reducing production lead times, production costs, storage costs, transportation costs and in some cases fuel consumption due to lighter design and material options. DLA R&D will leverage these efforts with Industry, Academia and ongoing Military Service-level agreements (Army, Navy, Marine Corps, Air Force), Oak Ridge National Laboratory (ORNL) and the Department of Energy.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	14.157	16.227	16.109
FY 2018 Plans:			
The Battery Network will initiate new projects and continue efforts from FY17 for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. The Battery Network will also transition new battery manufacturing technologies developed in Small Business Innovative Research (SBIR) - electrode laser cutting, solvent-free electrode production, low cost materials production or recycling, advanced performance cells. DLA will also continue initiatives for manufacturing and material improvements in the vacuum electron tube supply base (used in microwave and radar systems) and pursue additional opportunities.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>The Subsistence Network program plans to initiate and execute short-term projects in FY18, and continue efforts from FY17. SUBNET will also continue to pursue SBIR Topics in Subsistence. The Subsistence Network will also continue to work with community partners (military services, industry, and academia) to leverage the latest technologies, encourage innovation and modernization, and promote manufacturing improvements in the subsistence supply chain.</p> <p>The Castings program plans to investigate, develop and deploy innovative enterprise and technical solutions to improve casting supply chains for the Department of Defense and the Defense Logistics Agency to support the warfighter. A Broad Agency Announcement (BAA) closed in FY17 and from that, we competitively award contracts to fulfill those requirements. Projects will be required to include a business case with specific metrics and a transition plan for success. The Casting program will also continue executing projects approved and awarded in prior years.</p> <p>The Forging program will continue executing projects approved and awarded in prior years. In addition, the Forging program will receive an increase in funding to cover the unfunded requirements identified during the PBR17 process. Projects will investigate, develop and deploy innovative enterprise and technical solutions to improve forging supply chains for the DoD and DLA to support the warfighter. We competitively award contracts to fulfill those requirements. Projects will include a business case with specific metrics and transition plan for success.</p> <p>The AM program plans to leverage Industry and the Military Service Engineering Support Activities (via Service-level agreements with the Army, Navy, Marine Corps, Air Force) ORNL and the Department of Energy by providing funding for AM support activities work identified under the respective agreements. Desired outcomes include: acceleration of rapid qualification and certification methodologies for AM, identification of AM applications for castings and forging preforms, rapid cast production and repair of castings using AM, exploration of conversion of recyclable materials to AM material, improved reverse engineering processes for AM purposes, and optimization of polymer and metal AM production to obtain land, air and sea and expeditionary platform spare parts. These efforts seek to increase the number of AM parts qualified for procurement and achieve savings from the associated lead-time, storage costs, transportation costs, in some cases reduction of fuel consumption due to lighter design and material options. Overall DLA Enterprise AM efforts will provide alternatives in product realization in order to address unfulfilled Warfighter readiness needs.</p> <p>FY 2019 Plans: The Battery Network will initiate new projects for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. The program will also leverage new battery manufacturing technologies for the supply chain that have been developed by industry – advanced electrode production, low cost materials production or recycling,</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>advanced performance cells, and deep-discharge lithium-ion capabilities. The program will continue addressing additional requirements for manufacturing and material improvements in the vacuum electron tube supply base.</p> <p>The Subsistence Network program plans to research and execute short-term innovative projects to improve the subsistence supply chain in FY19, and continue efforts from FY18. The Subsistence Network will attend subsistence trade and industry events to leverage technology innovations and promote manufacturing improvements. The program will also pursue SBIR Topics in Subsistence. The Subsistence Network will work with community partners (military services, industry, and academia) to leverage the latest technologies, encourage innovation and modernization, and promote manufacturing improvements in the subsistence supply chain.</p> <p>The Castings program plans to research, develop and deploy innovative and technical solutions to ensure a viable and competitive domestic industrial base for the DoD and DLA in support of the needs of the warfighter. The program will use competitively awarded contracts to fulfill these requirements; projects are required to include a business case with specific metrics and a transition plan for success. The Casting program will continue to work with industry, academia, and the leading Industry Associations to identify improvements to materials, processes, and business practices of the nation's metal casting industry. The Casting program will continue to execute projects approved and awarded in prior years but will also maintain focus on future development and needs while executing projects awarded in FY19.</p> <p>The Forging program will investigate, develop and deploy innovative enterprise and technical solutions to strengthen the forging supply chain and the forging industry. The program will explore alternative forging manufacturing methods, materials and modeling to reduce production lead time and costs. Enhancements to modeling and simulation software coupled with forging process and post-processing improvements are some projects that align the forging program with fulfilling the needs of the warfighter. The Forging program will also continue to execute projects approved and awarded in prior years.</p> <p>The AM Program plans to fund technically proficient efforts that accelerate the rapid qualification and certification methodologies for AM items, identify the best AM applications for castings and forging preforms, achieve precise repeatability of part fabrication using an AM technical data package at simultaneous geographic points of need and prove the delivery of AM parts to warfighters deployed at expeditionary sea, land or air bases. Using market research, requests for information/proposals, Broad Agency Announcements (BAA), DLA R&D will identify the best courses of action to negotiate intellectual property for AM fabrication data to keep these items competitive. The DLA R&D efforts include the proof of concept of using digital thread methodologies to effectively manage manufacturing data and maintain a consistent AM product from design through qualification and acceptance. Collaboration will continue with the Military Service Engineering Support Activities (via Service-level agreements with the Army, Navy, Marine Corps, Air Force) and the Department of Energy by providing funding for AM work identified under the respective</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>agreements. The partnership with ORNL will allow further options with the Big Area AM (BAAM) family of parts. DLA will leverage Military Services and Industry collaboration to develop digital verification and validation (including measures of effectiveness and key performance parameters) of AM technical data and first article testing for polymers and metals, and critical and non-critical items. These efforts seek to increase the number of AM parts qualified for procurement and achieve savings from the associated lead-time, storage costs, transportation costs, in some cases reduction of fuel consumption due to lighter design and material options.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> FY19 increase is to begin to automate combat rations visual inspections and prepare for future innovative nanotechnology packaging systems for combat rations.</p>			
Accomplishments/Planned Programs Subtotals	14.157	16.227	16.109

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>				Project (Number/Name) AAA / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
AAA: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	0.000	4.302	17.103	27.770	-	27.770	19.422	19.749	19.825	20.094	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Maintaining Viable Supply Sources SFA are projects undertaken to assure that the industrial base can respond to DLA requirements and DLA can fill military customers' material requirements reliably and consistently. Benefits include eliminating cancelled requisitions returned to customers as "non-procurable." This strategic focus area includes within its scope the former Material Acquisition Electronics (MAE) program.

The MAE Roadmap has four major thrusts in Digital Microcircuits: Advanced Schottky TTL, TTL Compatible CMOS, 512 Kilobit RAM/ROM and Mega Gate ASIC. The Roadmap also includes a new major thrust area: Linear Microcircuits. Over the past several years, obsolescence in this class of microcircuits has greatly increased and has become a significant concern. These are classes of microcircuits that are expected to become non-procurable in FY 17 and beyond. Without the technologies planned on the MAE Roadmap, DLA will not be able to support DoD's requirements for high quality spare parts for critical electronic systems and subsystems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Maintaining Viable Supply Sources (formerly High Quality Sources)	4.302	17.103	27.770
FY 2018 Plans: MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. MAE will continue a major new thrust in emulation to address Linear Microcircuits in addition to its traditional focus on Digital. Several efforts will address basic design, manufacturing, electrical test and quality/reliability requirements for establishing a basis for product-oriented developments across the FYDP. MAE will also complete development and transition TTL-Compatible CMOS Microcircuit Emulation capability into full-scale production increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. The newly transitioned emulation capabilities will address several discontinued device families and will increase the potential emulation production envelope by several hundred NSNs. MAE will also continue development of additional emulation capabilities including development of a 1 million gate Application-Specific Integration Circuit (ASIC) and 256K Read-Only and Random-Access Memory Emulation Capabilities. It will begin applying 350 nanometer emulation technology to specific part families for additional NSNs.			
FY 2019 Plans: MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. It will begin digital microcircuit process development at the 250 nanometer technology node including development of electron-beam lithography techniques. MAE will continue a major new thrust in emulation to address Linear Microcircuits in addition to its traditional focus on Digital. Several efforts will address basic design,			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) AAA / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>manufacturing, electrical test and quality/reliability requirements for establishing a basis for product-oriented developments across the FYDP. MAE will complete and transition 20-Volt operational amplifier emulation capability into full-scale production increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. MAE will continue 40-Volt operational amplifier and analog switch projects started in FY18. It will continue applying 350 nanometer emulation technology to specific part families for additional NSNs including 256K Static Random Access Memory (SRAM).</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The proposed FY19 one-year \$9M investment in equipment will graduate the Advanced Microcircuit Emulation program from soon to be antiquated photolithographic manufacturing techniques to use the more advanced electron beam lithography microcircuit manufacturing methods, which will support at least two future generations of technology over 10 to 15 years.</p>			
Accomplishments/Planned Programs Subtotals	4.302	17.103	27.770

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>				Project (Number/Name) OOO / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
OOO: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	0.000	1.277	7.181	5.788	-	5.788	4.756	4.931	4.871	4.944	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Improving Technical and Logistics Information SFA projects improve and facilitate the communication of technical and logistics information among industry, DLA's military customers and DLA. This SFA includes the Military Unique Sustainment Technology (MUST), the Defense Logistics Information Research (DLIR), and the Emergent Manufacturing Technology (EMT) portfolios within its scope.

The MUST Program focus addresses GAO Report 12-707 recommendations for DoD to establish a "knowledge-based approach" to collaborate on define and communicate of military unique requirements. DLA has the responsibility to communicate and manage the technical requirements among the Services and the Defense Industrial Base. Currently there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop and adopt technologies that can significantly reduce the lead-time between Individual Item and Equipment (IIE) development and sustainment from years to months. The Program focuses on technologies that will transform the military IIE supply chain from an "electronic paper" (i.e. PDF/MS Word) based, manual environment into a knowledge based automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end-to-end supply chain.

The DLIR program researches core technology to improve the quality, speed, and interoperability of logistics data. DLA must transform business practices and methodologies as the data for weapons systems evolves from traditional formats and delivery methods (such as two-dimensional images and PDF formats) to newer, more innovative methods (such as three-dimensional solid models, object-oriented databases, service-oriented architecture (SOA) and Web 3C standards). This fundamental shift for DLA is driven by the Model-Based Enterprise approach, which is influencing the way industry is delivering design and development data for weapon systems to the Military Services and the way the Military Services in turn manage and provide the data to DLA. DLA Logistics Operations, DLA Acquisition, DLA Tech/Quality, and the Defense Standardization Program Office (DSPO) are key stakeholders in the DLIR initiatives to modernize the representation and delivery of weapons systems data. The DLIR program researches and demonstrates the use of innovative technologies to streamline DLA operations; current thrusts include development of logistics data interoperability and availability, and research into the transformation of DLA data repositories to a digitally linked, model-based enterprise.

The Technical and Logistical Data Interoperability will pioneer methods to capture data from military Services, Original Equipment Manufacturers (OEMs), and suppliers to form a seamless thread of interoperable and linked data models.

The EMT program addresses emerging and out of cycle requirements that always occur as DLA strives to maintain readiness of the aging weapon systems.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) OOO / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Title: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</p> <p>FY 2018 Plans: DLIR plans to resume moving DLA from PDF Tech Data to Smart Data and Engineering Models and leveraging semantic technology to improve logistics data across the DLA Enterprise.</p> <p>MUST plans to continue test and validation pilots as well as process reengineering. In addition MUST plans to begin a schedule for prototype development and demonstration to be initiated in FY19.</p> <p>Emerging Manufacturing Technology program enables DLA to investigate new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts. This program enables the Agency to advance those technologies sooner to the warfighter earlier. SBIR phase III efforts (which cannot be funded with SBIR funds) are a prime example of activities that will be funded with these funds, examples include emerging magnetic braking technologies, and addressing strategic materials shortage/risk.</p> <p>FY 2019 Plans: DLIR plans to continue assisting DLA improve the quality and interoperability of logistics data across the Enterprise and for the defense industrial base. Specifically, DLIR will initiate the Logistics Interoperability Technology Extension (LITE) project. LITE proposes publishing logistics documents as data instead of PDF utilizing advanced semantic interpretation techniques to extract and model the data inside the document. This approach will be based upon open standards to improve publishability of documents and to ensure broad industry adoption. LITE will enable improved interoperability between DOD internal and external data sources.</p> <p>MUST plans to conduct test and validation pilots, process reengineering to provide complete Function Requirement Document (FRD) for transition. The focus will be the Product Test Center (PTC) industry reporting module, the TexSpec conversion for Spec Change Management, the Supply Request Package (SRP) process reengineering and the Shade Instrument Large Scale Pilot. Schedule for Implementations with complete FRDs will start in FY19.</p> <p>The EMT program enables DLA to investigate new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts. This program enables the Agency to advance those technologies sooner in order to provide to the warfighter earlier. SBIR phase III efforts (which cannot be funded with SBIR funds) are a prime example of activities that will be funded with these funds, examples include emerging magnetic braking technologies, and addressing strategic materials shortage/risk. Efforts will begin in FY19 to advance Digital Manufacturing by developing a comprehensive approach to take advantage of integrated, computer-based systems of simulation, three-dimensional (3D) visualization, analytics</p>	1.277	7.181	5.788

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) OOO / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
and various collaboration tools to create and manufacture products to support the warfighter. Additionally, any emergent Strategic Materials requirements will be addressed through the EMT program.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> FY19 decrease due to funds realignment to Maintaining Viable Supply Sources.			
Accomplishments/Planned Programs Subtotals	1.277	7.181	5.788

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex; non-studies) will transition.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	120.123	14.541	10.611	11.778	-	11.778	12.067	12.358	12.548	12.786	Continuing	Continuing
0: <i>Prior Years</i>	105.030	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
EMM: <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>	3.471	4.090	4.062	4.131	-	4.131	4.223	4.321	4.414	4.496	Continuing	Continuing
GLTD: <i>Improving Logistics Processes (formerly Logistics Process)</i>	5.413	4.990	3.849	3.904	-	3.904	4.015	4.128	4.214	4.280	Continuing	Continuing
04: <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>	6.209	5.461	2.700	3.743	-	3.743	3.829	3.909	3.920	4.010	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency is responsible for providing to the Military Services, and other Federal Agencies, as well as combined and allied forces the full spectrum of logistics, acquisition and technical services. DLA sources and provides virtually 100 percent of the consumable items the military forces need to operate – including food, uniforms, fuel and energy, medical supplies, construction and barrier materials and equipment, and more than 85 percent of the military’s spare parts. DLA also provides logistics services including logistics information data, manages the reutilization of military equipment, and documents automation and production services. DLAs Logistics Research and Development (Log R&D) program helps ensure that advanced logistics concepts and business processes are used to accomplish the agency’s mission with the leanest possible infrastructure. Log R&D identifies the best commercial business practices and tailors them, as necessary, into the most effective business processes for the agency. Logistics R&D develops and demonstrates high risk, high payoff technology that provides a significantly higher level of support at the lowest possible costs.

The DLA Log R&D program is organized into three SFAs:

- Enhancing Analysis, Modeling, and Decision Support: R&D efforts to develop decision support tools, such as modeling, simulation, and other analytics to improve operational strategy decision-making, forecasting, and procurement, which support more effective and efficient responses to emerging market and customer requirements.
- Improving Logistics Processes: R&D efforts to develop and implement advanced technology in logistics processes over and above current baseline systems.
- Emergent Logistics R&D Requirements: R&D efforts to support emergent Logistics R&D requirements that arise out of the budget cycle. These out of cycle requirements always occur. The SFA begins new projects in a timely manner without disrupting ongoing projects by funds reallocation. This SFA scope includes all DLA supply chains and logistics processes.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	11.011	10.611	11.881	-	11.881
Current President's Budget	14.541	10.611	11.778	-	11.778
Total Adjustments	3.530	0.000	-0.103	-	-0.103
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	4.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.037	-			
• SBIR/STTR Transfer	-0.433	-			
• Inflation Adjustment	-	-	-0.103	-	-0.103

Change Summary Explanation

In FY2017, the Logistics R&D program received a Congressional Add for \$4M to support and advance cellulosic biofuels. The program reprogramed funds to Manufacturing Technology in the amount of \$0.037M. In FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.433M.

Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>				Project (Number/Name) 0 / <i>Prior Years</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
0: <i>Prior Years</i>	105.030	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Prior Years include:

-Medical Logistics Network (MLN): \$10.334M. This project was realigned to Strategic Focus Area (SFA) Emergent Logistics R&D Requirements. The MLN program supports the Medical Directorate's mission to develop and implement the critical logistics and medical supply chain business practices that ensure the cost-effective and efficient distribution of medical materiel to the full range of Military Health System operations.

-Weapon System Sustainment (WSS): \$29.625M. This project was realigned to SFA Improving Logistics Processes. The WSS program spans multiple weapon systems and supply chains to improve internal processes, provide new methods, reduce costs and lead times, and ultimately, improve readiness for DLA customers.

-Supply Chain Management (SCM): \$20.574M. This project was realigned to SFA Emergent Logistics R&D Requirements. The SCM program provides the Agency with the resources needed to quickly take advantage of new ideas emerging from the Center Commanders, Process Owners, or Staff Directors.

-Strategic Distribution & Disposition (SDD): \$19.396M. This project was realigned to SFA Enhancing Analysis, Modeling, and Decision Support. The SDD program improves DLA's distribution and disposition capabilities, operational effectiveness, and efficiency in support of the Services, COCOMs, and DOD in CONUS, OCONUS, and deployed locations.

-Energy Readiness Program (ERP): \$15.796M. This project was realigned to SFA Emergent Logistics R&D Requirements. The ERP includes Program Management Office Support (PMO) for developing program strategies and goals; Alternate Energy Development (AED) to include test and certification to support the addition of synthetic and alternative fuels to mobility fuel specifications and acquisition plan; Improving Class IIIB supply chain through Current Product Improvement (CPI) (such as the study and development of fuel additives and studies to increase sources of supply) and Infrastructure & Process Improvement (such as the development of analytical tools).

-Defense Logistics Information Research (DLIR): \$9.305M. This project was realigned to Industrial Manufacturing PE 70708011S. The DLIR program researches, identifies, and implements potential or existing technologies using high-risk, high payoff tools, methods, techniques, and products. DLIR improves functional and business processes using the latest technologies available to support the nation's warfighter. The technical areas of interest is the development of Logistics Data Interoperability & Availability. Enhances the functionality and compatibility of data in a complex data environment using supply chain relationships and lifecycle management to allow flexible visibility.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) EMM / <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EMM: <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>	3.471	4.090	4.062	4.131	-	4.131	4.223	4.321	4.414	4.496	Continuing	Continuing

A. Mission Description and Budget Item Justification

This SFA funds developments in advanced analytical tools, modeling, and simulation of logistics and supply chain processes. These tools will improve DLA forecasting and procurement strategy decisions and lead to faster and more flexible responsiveness to emerging market and customer requirements. The Strategic Distribution and Disposition (SDD) thrust will develop and implement analytical tools, models, and simulations of logistics and supply chain processes related to distribution and disposition.

The mission of the SDD program is to assist DLA Distribution and Disposition Services in anticipating, assessing, and meeting current and future Warfighter requirements by leveraging R&D to infuse innovative solutions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Enhancing Analysis, Modeling, and Decision Support	4.090	4.062	4.131
FY 2018 Plans: SDD will complete the lead-acid and Lithium-Ion battery technology projects in support DLA Distribution and provide support to the Distribution Modernization Program (DMP) to identify, evaluate, and test disruptive technologies.			
FY 2019 Plans: SDD plans to continue providing analytical and decision support to DLA Distribution and Disposition Services providing advanced analytical tools such as Business Case Analyses (BCAs) that support DLA Distribution and Disposition Services strategic decisions. Additionally, SDD will continue to support the Distribution Modernization Program as necessary to identify, evaluate, and test disruptive technologies including drone technologies applicable to distribution and disposition.			
FY 2018 to FY 2019 Increase/Decrease Statement: No significant Increase/Decrease in FY19 Budget for SDD.			
Accomplishments/Planned Programs Subtotals	4.090	4.062	4.131

C. Other Program Funding Summary (\$ in Millions)

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) EMM / <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>

C. Other Program Funding Summary (\$ in Millions)

Remarks

Due to the decline of planned requirements, the Medical Logistics Network realigned to the Emergent Logistics R&D Requirements SFA in FY19.

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>				Project (Number/Name) GLTD / <i>Improving Logistics Processes (formerly Logistics Process)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
GLTD: <i>Improving Logistics Processes (formerly Logistics Process)</i>	5.413	4.990	3.849	3.904	-	3.904	4.015	4.128	4.214	4.280	Continuing	Continuing

A. Mission Description and Budget Item Justification

Logistics Processes are R&D efforts within the Weapon System Sustainment Program (WSS) undertaken to develop and implement advanced technology in the internal DLA logistics processes. To qualify for R&D funding, the R&D effort must develop and apply technology and processes over and above current baseline IT systems and continuous improvements efforts.

This strategic focus area has 2 thrusts: Technical/Quality (T/Q) Process Improvements and Selected Process Improvements.

T/Q Process Improvements to reduce material and internal costs and improve support to warfighters. Services have engineering responsibility for most Class IX parts. Many T/Q sub-processes involve interactions with Service engineering functions, which often are time-consuming and costly. Other key T/Q sub-processes are essential to the procurement function, such as analysis of parts content, source capabilities and problem resolution.

Selected Process Improvements cover processes outside the scope of the Technical/Quality (T/Q) function. Although all DLA processes are in scope, the focus for FY 2019 is on the Procurement process, especially aspects driving internal costs and delays in awards.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Improving Logistics Processes (LP)	4.990	3.849	3.904
FY 2018 Plans: In FY2018, WSS will work with procurement to implement their long-term process improvement plans. Projects will focus on the areas of obtaining Market Intelligence, Industrial Outreach, and Long-Term Contract cost reduction. WSS will work with TQ to develop an Anti-Counterfeiting Roadmap of projects aimed at identifying and eliminating the threat of counterfeit parts entering the supply chain.			
FY 2019 Plans: In FY2019, WSS will continue working with Procurement to implement their long term process improvement plans to include follow on projects in the areas of Administrative and Production Lead Time Management. Another main thrust for FY2019 will be the execution of projects identified in the Anti-Counterfeiting Roadmap of FY2018.			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) GLTD / <i>Improving Logistics Processes (formerly Logistics Process)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
No significant Increase/Decrease in FY19 Budget.			
Accomplishments/Planned Programs Subtotals	4.990	3.849	3.904

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) 04 / <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>04: Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>	6.209	5.461	2.700	3.743	-	3.743	3.829	3.909	3.920	4.010	Continuing	Continuing

A. Mission Description and Budget Item Justification

Emergent Logistics R&D SFA includes R&D efforts to develop new products and services for DLA customers. The ERP Roadmap helps to achieve the operational energy strategy goals of increasing sources of supply, developing and implementing alternative fuels under the ERP. The Supply Chain Management (SCM) Roadmap addresses emerging and out of cycle requirements that always occur and new products and services developed by DLA to include investments to qualify domestic, ultra-high modulus, carbon fiber material for Defense and National Security space systems in order to mitigate the supply chain costs and risks of this strategic material.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Emergent Logistics R&D Requirements	5.461	2.700	3.743
FY 2018 Plans: SCM will continue to address the emerging technology opportunities that occur out of the budget cycle. This allows DLA to get a head start undertaking new technological advances without disrupting ongoing programs. In the past DLA R&D has been able to cut 12 to 24 months off the project starting lead-times. Saving the lead-time allows the agency to begin to realize the benefits of implementing new technology sooner than would otherwise be the case and maintain continuity of funding and activity for baseline programs. The Program will initiate the Advanced Thermoelectric Technology project to improve the current thermoelectric heater technology so it is more fuel-efficient, has an increased heating range, reduced maintenance requirements, and a longer service life. The Advanced Thermoelectric Heater will replace the existing Space Heater Convective standard heaters currently stocked at DLA, and will provide DoD a single, versatile heater that reduces the logistics footprint and satisfies the space heating requirements of expeditionary forces. Additionally, SCM will support DLA Strategic Materials with one or more cost saving opportunities that exist for DLA via recycling and recovery initiatives.			
In FY18, the AM project will be funded under PE 0603680S / Manufacturing Technology Program (ManTech) Project 7 - Improving Industrial Base Manufacturing Processes (formerly Material Availability). This realignment will maintain continuity of funding and activity for this program.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) 04 / <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>ERP will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers.</p> <p>FY 2019 Plans: SCM will continue to address the emerging opportunities that occur in the supply chain. Initiatives will align strategically and produce benefits such as reduced operating costs, enhanced organizational responsiveness and reliability, network resiliency, and streamlined customer service. Emerging technology requirements for the medical supply chain will be addressed, as appropriate in SCM. (Mission moved from Enhancing Analysis, Modeling, and Decision Support SFA.) Additionally, SCM will complete the Advanced Thermoelectric Technology project to improve the current thermoelectric heater technology so it is more fuel-efficient, has an increased heating range, reduced maintenance requirements, and a longer service life. The Advanced Thermoelectric Heater will replace the existing Space Heater Convective standard heaters currently stocked at DLA, and will provide DoD a single, versatile heater that reduces the logistics footprint and satisfies the space heating requirements of expeditionary forces.</p> <p>Strategic Materials: Program will address supply chain risks in Strategic and Critical Materials as needed to include qualifying alternate materials and sources, recycling or reclaiming strategic materials, and developing new manufacturing processes for strategic materials. Artificial Intelligence technologies applicable to logistics operations will be investigated and, where appropriate, prototyped. Applications for Block Chain technologies will be investigated and prototyped in the SCM SFA.</p> <p>ERP will focus on determining R&D solutions for ongoing issues affecting fuel and fuel additive quality and operational requirements (e.g. thermal stability, storage stability, ignition capability). The program will continue to assist the military services in the qualification and certification of alternative fuels to meet military specification requirements; this will be parallel to the availability of military resources necessary to complete these efforts. The ERP program will investigate and prototype, as appropriate, drone technologies applied to the energy operations.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funding increased to develop improvements in the Class IIIB fuel and energy supply chain and support research in the areas of alternative bulk liquid fuels and alternative energy for the military services. Specifically Test Method Developments/Revisions, Fuel Chemistry and Contamination Identification / Characterization, and Logistics systems Improvements/Enhancements.</p>			
Accomplishments/Planned Programs Subtotals	5.461	2.700	3.743

C. Other Program Funding Summary (\$ in Millions) N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&D)</i>	Project (Number/Name) 04 / <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>

C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	175.886	6.618	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	182.504
0: <i>Prior Years</i>	62.214	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	62.214
8: <i>Command and Control/Optimization/Modeling and Simulation</i>	73.951	2.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	75.951
9: <i>Cyber</i>	11.216	1.018	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.234
10A: <i>Global Access</i>	28.505	3.600	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	32.105

Note

In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

A. Mission Description and Budget Item Justification

USTRANSCOM is tasked to provide globally integrated, agile deployment and distribution solutions as well as related enabling capabilities to support national security, force readiness and sustainability within an increasingly constrained defense budget. Unpredictable/extended global distribution routes, limited visibility of sustainment requirements, force packaging limitations, lift constraints, anti-access/area denial concerns, complex supply chains, as well as non-networked battlefield command and control, planning, and decision support tools impede timely customer logistical support. To project unimpeded global power and influence, USTRANSCOM must have access to relevant, real-time information, invest in enabling capabilities that contribute to mission success, ensure the viability of our capabilities, and implement a relevant transportation strategy. Effective knowledge sharing, decision support and transparency across the joint logistics enterprise, facilitated by secure enterprise-wide visibility into logistical processes as well as the ability to effectively collaborate/operate in a contested cyberspace, is required to promote the effective/efficient/responsive global management of force projection and sustainment resources.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	6.618	0.000	0.000	-	0.000
Total Adjustments	6.618	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	6.618	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

Under the FY2017 CR, this program remained in DLA's baseline. Once the budget was enacted, DLA is working, to get the funding returned from USTRANSCOM. Currently, the remaining programs awaiting the return of funds is Generic Logistics R&D (PE 30603712S) and Defense Agencies Initiatives (DAI) (PE50605080S).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 0 / <i>Prior Years</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>0: Prior Years</i>	62.214	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	62.214

A. Mission Description and Budget Item Justification

Prior Years includes:

-Capabilities Based Logistics: \$7.342M. The Department requires procedures and technologies which provide enterprise-level capabilities critical to the distribution system to improve performance of the end-to-end DOD supply chain in direct support of the full range of military operations. Ability to rapidly respond to customers' changing demands, with a reliably high level of service. These needs include: capabilities which enhance any supply or transportation mission (aeromedical, air refueling, joint logistics over-the-shore, and seabasing); analysis, tailoring and implementation of selected best enterprise-level practices from industry; and tools/procedures to optimize transportation plus supply (distribution) plans and schedules in support of an entire operation. This project addresses the required mission support to combatant commanders and other customers in the area of capability-based logistics.

-Deployment and Distribution Velocity Management: \$6.869M. DOD requires procedures/technologies targeted at optimizing throughput at the nodes and through the conduits of the deployment and distribution supply chains, from origin to point of use and return to include: inventory management enhancers (includes node cargo management/tracking); materiel handling innovations (including methods of reducing handling); improved physical access to nodes (includes aircraft all-weather visual systems); port throughput enhancements (includes in-port time reduction methods); and innovative delivery methods (for example, precision airlift, autonomous re-supply). This project addresses required mission support to combatant commanders and other customers of DOD's distribution and transportation systems in the area of deployment/distribution velocity management.

-Cross Domain Intuitive Planning: \$2.408M. Procedures/technologies which improve decision-making and collaboration within the supply chain, from the planning stage to real-time execution and retrograde operations, without need for highly specialized operators of the tools. Projects in this area address following areas: decision support tools for any echelon of the supply chain or decision-maker, distribution process simulations and models for analysis and training, distribution demand forecasting/execution monitoring tools, on-line training, automated decision-maker support (e.g., queuing, alerting, recommended courses of action), automated status monitoring with information fusion and drilldown capability, and resilient C2 infrastructure capabilities. This project will provide required mission support to combatant commanders and other distribution/transportation customers in the area of collaborative planning/execution/information sharing/decision support tools.

-End-to-End Visibility: \$7.039M. Enhanced end-to-end visibility of all aspects of power projection/sustainment spectrum is required to improve the effectiveness/efficiency of deployment/distribution/redeployment operations to ensure warfighter support and confidence. This requires investigation into next generation Automated Information Technology (AIT)/Total Asset Visibility (TAV) technologies and/or container security to improve end-to-end distribution visibility, enhance planning/execution, and transform sustainment operations. Includes the ability to determine immediate, reliable, and accurate shipment status through system access or event management. Develop an over-arching process/system architecture which will integrate existing and innovative new programs across the supply chain to provide complete In Transit Visibility (ITV) data, to include visibility of non-DoD cargo during humanitarian/disaster relief operations. The ability of USTRANSCOM to supply transportation support for homeland defense and/or disaster relief depends on effective ways to link with other governmental and civilian agencies. Additionally need to explore the many

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 0 / <i>Prior Years</i>
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barriers across the Joint Deployment and Distribution Enterprise (JDDE), to include non-DoD government entities, coalition partners, non-government organizations, and commercial industry, which can create confusion/conflict or detract from the optimization of the JDDE.

-Distribution Planning and Forecasting: \$8.504M. There is a lack of collaborative distribution planning, based on an understanding of aggregated customer requirements, for optimizing the end-to-end distribution process. Planning, forecasting and collaboration are insufficiently advanced to fully synchronize people, processes and assets to execute planned operations. Automated tools should be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems. Project investigates the need for flexible end-to-end enhanced modeling and simulation and collaborative decision support tools.

-Joint Transportation Interface: \$14.917M. Synchronizing strategic/theater delivery capabilities to meet increasingly dynamic customer needs. Transportation information exchange across the DOD is inhibited by the disparity of systems, differing data standards, and insufficient interfaces. Queries and retrieval of status and shipment information cannot be executed due to lack of connectivity between the various components of the supply chain. The ability to maintain situational awareness of movements at macro/micro (drill down) levels, with associated force and sustainment cargo on board; to track force packages progress, and rapidly determine the impact of any delays or changes to sailing progress and arrival at port of debarkation; and to conduct "what -if" impact assessment of possible changes to delivery asset's course, speed or departure/arrival information as it relates to force or force package delivery/impact of any change on the closure of force packages in theater is required. The ability of USTRANSCOM to supply transportation support for homeland defense and/or disaster relief depends on effective ways to link with other governmental and civilian agencies. Also need to explore the many barriers across the Joint Deployment and Distribution Enterprise (JDDE), to include non-DOD government entities, coalition partners, non-government organizations, and commercial industry, which can create confusion/conflict or detract from the optimization of the JDDE.

-Distribution Protection/Safety/Security: \$15.135M. The Theater Commander has not always been able to provide the appropriate security in a timely manner during deployment. In some cases there are insufficient security assets to oversee convoy security in-country; therefore, all movement requirements are competing for the same limited resources. Additionally need to explore new, portable methods of detecting hazardous/asymmetric materials in very small quantities to support safe logistics operations. Also explore technologies to enhance the capability to deliver personnel/materiel to anti-access/austere airfields and seaports.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 8 / <i>Command and Control/Optimization/Modeling and Simulation</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>8: Command and Control/Optimization/Modeling and Simulation</i>	73.951	2.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	75.951

A. Mission Description and Budget Item Justification

Capabilities which improve deployment, distribution and supply chain decision-making/collaboration (e.g., planning stage to real-time execution/retrograde operations) without need for highly specialized operators. Projects in this area address the following: decision support tools, distribution process simulations/analytics, distribution demand forecasting/execution monitoring, training, automated decision-maker support (e.g., queuing, alerting, courses of action), automated status monitoring with information fusion to include drilldown capability, and resilient C2 infrastructure capabilities. Current planning/forecasting/collaboration capabilities do not permit full synchronization of people, processes and assets to execute planned operations. Automated tools must be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems to include the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need. Transportation information exchange across the DOD is inhibited by disparate systems, multiple data standards and insufficient interfaces. The ability to rapidly determine the impact of any delays/changes and conduct "what -if" impact assessments on the closure of force packages is required. This project addresses the required mission support to combatant commanders and other customers in the area of C2, Optimization, and Modeling and Simulations.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 9 / <i>Cyber</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
9: <i>Cyber</i>	11.216	1.018	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.234

A. Mission Description and Budget Item Justification

USTRANSCOM requires mission assurance in a persuasive/dynamic cyber environment. USTRANSCOM requires the procedures/technologies to improve cyber surveillance and control of networks across multiple domains and the ability to continue critical network operations in contested unclassified and classified network environments. The Command also needs the ability to differentiate between valid/unauthorized users and determine/quantify the trustworthiness of hardware/software systems. Additionally must have the ability to rapidly analyze & correlate data regarding malicious activities, select/evoke real-time defense actuators, perform automated reasoning capabilities that address data quality issues, and the ability to rapidly return to a known/safe operating state.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 10A / <i>Global Access</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
10A: <i>Global Access</i>	28.505	3.600	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	32.105

A. Mission Description and Budget Item Justification

DoD requires procedures/technologies targeted at optimizing throughput at the nodes as well as across the conduits of the deployment and distribution supply chains, from origin to point of use as well as return. Needed capabilities include inventory/cargo management, materiel handling innovations, improved physical node access, port throughput enhancements, innovative delivery methods (e.g., precision airlift, autonomous re-supply), and cargo/container security. This project addresses required mission support to combatant commanders and other customers of DoD's distribution and transportation systems in the area of deployment/distribution velocity management, manned/unmanned systems to the point of effect, and increased global reach in austere/anti-access environments.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	392.266	88.369	219.803	168.931	-	168.931	172.442	157.720	160.280	170.393	Continuing	Continuing
001: <i>Technology Development</i>	216.668	44.833	133.074	73.471	-	73.471	75.111	59.200	60.169	61.210	Continuing	Continuing
003: <i>Trusted Foundry</i>	175.598	43.536	86.729	95.460	-	95.460	97.331	98.520	100.111	109.183	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department finds it critical to National Security to maintain an ability to produce low volume state-of-the-practice (SOTP) and legacy microelectronics that are unavailable from commercial foundries. The Defense Microelectronics Activity (DMEA) uniquely accomplishes this mission for the Department by providing a guaranteed and Trusted source of supply of microelectronics parts that are essential to combat operations. In addition DMEA provides the rare technology capability to bridge the gap between research and application allowing DMEA to develop, manage and implement innovative microelectronic solutions to enhance mission capability. This unique research and engineering capability will be leveraged to develop low-volume, high mix fabrication processes for state-of-the-art (SOTA) technologies that meet the Department's performance and reliability needs.

This is a critical capability in an atmosphere of diminishing domestic semiconductor manufacturing capability and increasing worldwide supply chain risks with threats to defense microelectronics. Trusted access to SOTA technologies remains a major challenge and therefore it is most important to develop a long term Trusted source for the Department. Threats to Defense Microelectronics include counterfeiting, Trojan horses, specific reliability issues in military environments, and rapid obsolescence coming from an unpredictable and unsecured supply chain. As fiscal pressures force the Department to maintain its weapon systems longer than originally planned, extended combat use increases their attrition and increases the need for DMEA's unique capabilities.

Microelectronics is a crucial technology and central for all operations within the Department. Yet, as vital as this technology is to Department operations, the defense market represents less than 0.1% share of the total global semiconductor market. The Department frequently requires low volume SOTP and legacy microelectronics long after commercial foundries have moved on to advanced technology levels. There is also the major challenge of the ability of Defense R&D Programs to access Trusted SOTA technologies when developing new systems. Consequently, the semiconductor industry does not respond to the Department's particular needs of low volumes, long availability time frames, or its high-level security concerns. To meet these requirements, DMEA procures commercial licenses to organically produce semiconductor technologies that are no longer commercially manufactured or are unavailable due to no-bids owing to low volume requirements. These licenses enable DMEA to be the Department's microelectronics supplier of last resort, providing the Department with a long-term, trusted, and guaranteed source of these critical parts. This proven model can be extended to SOTA technologies by acquiring advanced commercial process Intellectual Property (IP) and implementing it in a copy exact approach.

DMEA provides increasingly rare microelectronics design and fabrication expertise to ensure that the Department can field systems capable of ensuring technological superiority over potential adversaries. DMEA provides decisive, quick turn solutions for defense, intelligence, special operations, cyber and combat missions as well as microelectronic components that are unobtainable in the commercial market. DMEA has established increased ties with the Intelligence Community (IC) and Combatant Commanders to understand their specific threats and opportunities that can be exploited by quicker, more resilient microelectronic solutions. This knowledge of varying

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency Date: February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)
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requirements across a broad and diverse range of combatant environments and missions – along with its unique technical perspective – allows DMEA to develop, manage and implement novel microelectronic solutions to enhance mission capability. DMEA uses these cutting-edge technology capabilities and products in the solutions it develops for its military clientele. After many years of performing analogous efforts, the technical experience, mission knowledge, and practical judgment that are gained from preceding efforts are incorporated into subsequent technology maturation projects. DMEA has years of experience understanding the maturity of US and world microelectronics technology and knows what it takes to adapt the technology for the US warfighter. Based on the results of the knowledge DMEA acquires through technology forecasting, effective modeling/simulation, prototyping and experimentation, DMEA influences program requirements with recommended improvements and advancements. DMEA’s capabilities make it a key tool that can be leveraged by the entire US Government in the intelligent and rapid development and application of advanced technologies to identified military needs.

Working alongside industry, DMEA utilizes a business model that establishes a pathway that accelerates the delivery of superior semiconductor technologies. DMEA’s uniquely flexible foundry supports the Department with a wide variety of integrated circuits using various processes that were developed by commercial manufacturers and which are now guaranteed to remain in one location for as long as they are needed. To obtain these processes, DMEA works closely with U.S. semiconductor industry partners to acquire process licenses. DMEA incorporates commercial technology, along with accelerated acquisition methods to accelerate delivery of needed capability. In this way, DMEA revolutionizes the way the Department leverages commercial technology by exploiting business-cycle opportunities to access these technologies. In this way, the government ensures perpetual access to this technology without bearing the high, upfront process development and qualification costs.

These Government-held licenses allow for the transfer to DMEA of industry-developed IP and the related processes for Department needs. These licenses ensure no commercial conflicts by including industry’s right to bid first on resulting production volumes. DMEA always looks to industry first to see if it can provide the required components. If industry cannot or will not, only then does DMEA provide the necessary prototypes and low volume production order. A critical element required to make this business model work effectively is protection of the industry partners’ valuable IP and processes. DMEA is Government owned and operated, providing the structure and confidence necessary to ensure them that their IP is protected from potential competitors. This strategic and cooperative industry partnership approach allows DMEA to use industry-developed IP and processes by acquiring, installing, and applying them toward meeting the immediate and long-term needs of the Department. This unique capability is essential to all major weapon systems, combat operations, and support needs. As such, DMEA serves the Department, other US Agencies, industry and Allied nations.

DMEA assists hundreds of Department programs every year. DMEA has provided its specialized engineering assistance and capabilities to older systems, current systems, and even to programs not yet in the production phase. This includes the Counter-Rocket, Artillery, and Mortar (C-RAM) System, F-18 Super Hornet, F-22 Raptor, F-35, RQ-4 Global Hawk, MQ-9 Reaper, AEGIS Advanced Surface Missile System, Advanced Medium-Range Air-to-Air Missile (AMRAAM), HH-60G Pave Hawk Helicopter, Evolved Sea Sparrow Missile (ESSM), among many other programs. DMEA assists the Combatant Commands (COCOMs) including Special Ops, Cyber, Intelligence, and the Radiation-Hard communities.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	97.826	219.803	99.734	-	99.734
Current President's Budget	88.369	219.803	168.931	-	168.931
Total Adjustments	-9.457	0.000	69.197	-	69.197
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-8.000	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.457	-			
• Inflation Adjustment	-	-	-0.963	-	-0.963
• Program Requirements Increase	-	-	70.160	-	70.160

Change Summary Explanation

DMEA received a Congressional Rescission in the amount of \$8M for unobligated balances. In FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$1.457M.

Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019. The FY2019 increases for continued support for the top four FY2018 microelectronics initiatives, including full access to the GlobalFoundries Fab 8 (14 nm) foundry, associated upgrades to GlobalFoundries's ASIC design, tape-in, and test capabilities to facilitate 14 nm designs for weapon system program support (e.g., Military Global Positioning System (GPS) User Equipment (MGUE), and procurement of foundry process intellectual property.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>				Project (Number/Name) 001 / <i>Technology Development</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
001: <i>Technology Development</i>	216.668	44.833	133.074	73.471	-	73.471	75.111	59.200	60.169	61.210	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Technology Development funds provide DMEA with the core resources to execute its primary mission of providing an in-house ability to quickly develop and execute appropriate solutions to keep a weapon system operational, elevate its sophistication level, or to meet new threats. These solutions use high mix, low volume, unique microelectronics that are endemic to military requirements but are not commercially available. These funds provide for the development and support necessary to ensure rapid prototyping, insertion, and support of microelectronics technologies into fielded systems, particularly as the technologies advance. Extending this mission to include assured access to Trusted state-of-the-art (SOTA) technologies will more comprehensively ensure the integrity of microelectronics in all critical defense systems. DMEA maintains critical microelectronics design and fabrication skills to ensure that the Department is provided with systems capable of ensuring technological superiority over potential adversaries. DMEA provides an in-house capability to support these strategically important microelectronics technologies with distinctive resources to meet the Department's requirements across the entire spectrum of technology development, acquisition, and long-term support. This includes producing components to meet the Department's requirements for ultra-low volume, an extended availability timeframe, and a trusted, guaranteed and secure supply of microelectronics. These funds provide basic infrastructure upgrades to acquire IP and manufacturing capabilities of SOTA technologies via the copy exact model, as well as an in-house technical staff of skilled and experienced microelectronics personnel working in state-of-the-practice facilities providing technical and application engineering support for the implementation of advanced microelectronics research technologies from inspection and analysis through design, fabrication, test, assembly, integration and installation. These funds also provide for the recapitalization and modernization of aging microelectronic infrastructure, acquisition and implementation of design and test tools, the development of advanced techniques to inspect and analyze circuits, the adaptation of tools and processes to detect increasingly sophisticated counterfeit microelectronics in the defense supply chain, and the incorporation of the process technologies that are necessary to anticipate the needs of the Department as weapon system support requirements migrate toward current state-of-the-art technologies. DMEA's capabilities make it a key resource in the intelligent and rapid application of advanced technologies to add needed performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. DMEA designs, develops, and supports vital classified assets for ongoing and time-sensitive specialized intelligence operations and missions of the Department and the Special Operations Commands.

Today's weapon systems experience extended field operations and are required to remain in service beyond planned replacement schedules, driving the need for growth in DMEA's unique capabilities. This need, along with the continual contraction of commercial resources, makes DMEA the only available resource allowing many systems to remain operational. As such, DMEA and its capability are considered National Critical Assets.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Technology Development Accomplishments/Plans	44.833	133.074	73.471
FY 2018 Plans:			
DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 001 / <i>Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA's unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, extending and upgrading process IP, developing advanced techniques to inspect and analyze circuits, and adapting tools and processes to detect increasingly sophisticated counterfeit microelectronics to ensure a secure supply chain, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will complete installation of the cleanroom in the 200mm facility, and will begin installation of semiconductor fabrication equipment in the completed cleanroom. DMEA will procure critical 200mm process IP for integration into the 200mm facility.</p> <p>FY 2019 Plans: DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA's unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, extending and upgrading process IP, developing advanced techniques to inspect and analyze circuits, and adapting tools and processes to detect increasingly sophisticated counterfeit microelectronics to ensure a secure supply chain, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will complete installation of the cleanroom in the 200mm facility, and will begin installation of semiconductor fabrication equipment in the completed cleanroom. DMEA will start integration of the critical 200mm process IP into the 200mm facility.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 program decrease reflects a discontinuity in funding for certain FY2018 microelectronics initiatives, including the procurement and integration of 200mm foundry process intellectual property.</p>			
Accomplishments/Planned Programs Subtotals	44.833	133.074	73.471

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 001 / <i>Technology Development</i>

E. Performance Metrics N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>				Project (Number/Name) 003 / <i>Trusted Foundry</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
003: <i>Trusted Foundry</i>	175.598	43.536	86.729	95.460	-	95.460	97.331	98.520	100.111	109.183	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department, other agencies, and the intelligence community require uninterrupted access to state-of-the-art design and manufacturing processes to produce custom integrated circuits designed specifically for military purposes. Under DoDI 5200.44, Application Specific Integrated Circuits (ASICs) in critical/essential systems must be procured from Trusted sources in order to avoid altered or sabotaged parts. Worldwide competition from foreign, state-subsidized manufacturing facilities continues to greatly reduce the number of U.S. semiconductor fabrication facilities available to be Trusted sources. The prevalence of sophisticated offshore design and manufacturing facilities with economic incentives of state subsidies have resulted in the outsourcing of electronics component and integrated circuit services to these offshore facilities. This production capability is of increasing importance as domestic semiconductor manufacturing resources continue to decline, especially in the scarce domestic production capacity of high performance and state-of-the-art semiconductor technologies. Commercial sources of microelectronics remain inherently unpredictable and constitute a continued supply chain risk regardless of Government investment. This trend threatens the integrity and worldwide leadership of the U.S. semiconductor industry by eliminating many domestic suppliers and reducing access to Trusted fabrication sources for advanced technologies, and is of acute concern to the defense and intelligence communities. Secure communications and cryptographic applications, along with most other key defense technologies, depend heavily upon high performance semiconductors where a generation of improvement often translates into significant force multipliers and capability advantages. Important defense technology investments and demonstrations carry size, weight, power, and performance goals that can only be met through the use of the most sophisticated semiconductors.

The Trusted Foundry program provides the Department with access to state-of-the-art microelectronics design and manufacturing capabilities with the added benefit of Trust, if necessary, to meet their confidentiality, integrity, availability, performance and delivery needs. The program also provides the Services and other agencies with a competitive cadre of accredited Trusted suppliers that can meet the needs of their mission critical/essential systems for Trusted integrated circuit components. The Trusted Access Program Office has contracted with commercial sources to satisfy state-of-the-art semiconductor requirements. DMEA will foster all viable alternatives to continue the vital supply of Trusted microelectronics, including the work of the DMEA Trusted Access Program Office with commercial state-of-the-art industry. It is imperative for a wide range of technologies in ongoing and future Department systems that access to Trusted suppliers continues. Most importantly, access to Trusted Microelectronics is absolutely necessary to meet secure communication and cryptographic needs requiring state-of-the-art semiconductor technologies.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Trusted Foundry	43.536	86.729	95.460
FY 2018 Plans:			
Facilitate the availability of Trusted state-of-the-art semiconductor technology to DoD weapon system programs, research organizations, and other federal agencies through the DMEA Trusted Access Program Office (TAPO) contracts. Initiate efforts to extend Trusted access to 14 nm technology, including the securing of mask manufacturing and upgrading of Trusted ASIC design and test capabilities and capacity to facilitate 14 nm ASIC services needed by multiple DoD programs. Enhance the cadre			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 003 / <i>Trusted Foundry</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>of Trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted Microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that provide the Department's programs and other agencies with Trusted access to leading edge semiconductor technologies. Start implementation of an approach for the on-shore fabrication of a Trusted Field-Programmable Gate Array (FPGA). Continue the development of capabilities for the inspection and analysis of ASICs and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes.</p> <p><i>FY 2019 Plans:</i> Facilitate the availability of Trusted state-of-the-art semiconductor technology to DoD weapon system programs, research organizations, and other federal agencies through the DMEA Trusted Access Program Office (TAPO) contracts. Continue efforts to extend Trusted access to 14 nm technology for USG use through the TAPO contracts, and to provide access to other leading edge technologies. Enhance the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted Microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that ensure the Department has Trusted access to leading edge semiconductor technologies. Continue the development of new capabilities for the inspection and analysis of ASICs and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> FY2019 program decrease reflects a discontinuity in funding for certain FY2018 microelectronics initiatives, including access to the GlobalFoundries 14 nm foundry.</p>			
Accomplishments/Planned Programs Subtotals	43.536	86.729	95.460

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	117.472	3.661	6.266	3.173	-	3.173	2.378	1.486	0.743	0.757	Continuing	Continuing
0: <i>Prior Years</i>	100.112	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
09: <i>Enterprise Funds Distribution</i>	17.360	3.661	6.266	3.173	-	3.173	2.378	1.486	0.743	0.757	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of the DoD Enterprise Business Systems (DEBS) is to coordinate and enable business transformation efforts across the Department of Defense (DoD). The DLA recognizes that DoD's business enterprise must be closer to its warfighting customers than ever before. Joint military requirements drive the need for greater commonality and integration of business and financial operations.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	5.660	6.266	3.200	-	3.200
Current President's Budget	3.661	6.266	3.173	-	3.173
Total Adjustments	-1.999	0.000	-0.027	-	-0.027
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.139	-			
• FY 2017 Request for Additional Appropriations Not Addressed	-1.860	-	-	-	-
• Inflation Adjustment	-	-	-0.027	-	-0.027

Change Summary Explanation

In FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.139M. In FY2017, EFD request for additional appropriations was not addressed.

Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 0 / Prior Years
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
0: Prior Years	100.112	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Prior Year includes:

-Business Enterprise Information Services (BEIS): \$13.360M. The BEIS utilized the mature, existing infrastructure of Defense Corporate Database/Defense Corporate Warehouse (DCD/DCW), Defense Departmental Reporting System (DDRS), and Defense Cash Accountability System (DCAS) to provide timely, accurate, and reliable business information from across the DoD to support auditable financial statements as well as provide detailed information visibility for management in support of the Warfighter. The goals of BEIS were to ensure data compliance with Standard Financial Information Structure (SFIS) standards; provide security-defined, enterprise-level access to information for ad hoc management queries; and produce external financial management reports/statements based on standardized data.

-Defense Information System for Security (DISS): \$70.319M. The DISS program was a family of systems solution that specifically addresses the security clearance and suitability determinations requirements of Section 3001 of Public Law 108-458, the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA) which requires 90% of all clearances – whether Top Secret, Secret, or Confidential – to be completed within 60 days, as well as supports Homeland Security Presidential Directive 12 (HSPD-12) compliance across the DoD. The DISS electronically collects, reviews, and shares relevant data, government-wide, as mandated by the IRPTA and, guided by relevant Executive Orders, Congress, and GAO recommendations, deliver and maintain an appropriately vetted world-class workforce.

-Defense Travel System (DTS): \$1.423M. The DTS program was a fully integrated, electronic, end-to-end financial management system that automates temporary duty travel for the Department of Defense (DoD). DTS meets unique DoD mission, security and financial system requirements within the guidelines of Federal and DoD travel policies and regulations. DTS automates travel authorizations, reservations and arrangements, voucher processing, payment, reconciliation, accountability and archiving. DTS employs Digital Signature and Login/Authentication which requires users to provide a signed response using a valid DoD Public Key Infrastructure (PKI) certificate to gain access to the DTS application. Travel documents created in DTS are digitally signed with the user's PKI certificate to provide a means of identifying the signer, verifying the document's integrity, and enforcing non-repudiation of the signature by the signer.

-Defense Retired and Annuitant Pay System (DRAS): \$15.010M. The DRAS program established and maintained a modernized retired military pay accounts. DRAS 2 will replace the current Defense Retiree and Annuitant Systems (DRAS) and selected manual processes with proven state of the market technology using Clinger-Cohen guidance for selection of the solution. Rapid fielding techniques will be used to close business process gaps by delivering incremental capability that provides clear financial benefits.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 09 / Enterprise Funds Distribution
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
09: Enterprise Funds Distribution	17.360	3.661	6.266	3.173	-	3.173	2.378	1.486	0.743	0.757	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Enterprise Funds Distribution (EFD) is a multi-service/multi-agency solution established as a key initiative to provide full visibility of funds distributed through echelon I and II for the Military Departments and at all levels for the Defense Agencies to improve and modernize the OUSD(C) funds distribution process. Funds distribution by its nature is a key enabler of financial visibility within DoD enterprise systems. The concept of a fully visible enterprise funds distribution process serves as a reference where planned and coordinated funds development and execution takes place.

Within the current DoD environment, progress has been made streamlining a diverse set of stove-piped budget execution and funds distribution processes and systems. Efforts continue to improve the visibility of funding information, eliminate manual efforts and undue complexities to the management of budget authority, and to eliminate impediments in the flow of funding documents. The current environment relies heavily on manual processing and on disconnected standalone systems for the processing of Funding Authorization Documents (FADs) and reprogramming actions. This environment made the implementation of internal controls difficult, negatively impacted the accuracy and timeliness of information while making the processes of integrating and obtaining management information arduous.

The envisioned operational environment solves these problems by enabling lifecycle program value management in a web-based application utilizing an authoritative database with single-source data entry and automated workflow. Capabilities within this integrated environment will enable the automation of all funds distribution and funds control processes within OUSD(C) using authoritative and highly visible data. Specifically, capabilities include managing apportionments, distributing budget authority to the Military Departments and Defense Agencies, managing rescissions and continuing resolutions, creating and tracking reprogramming actions, and establishing program baselines and budget authority needed to support changes in funding priorities throughout the year.

The operational environment includes organizational elements down to the echelon II level responsible for managing DoD and Component appropriations operating in an unclassified environment. The web-based application provides pre-planning, apportionment, reprogramming, rescission, continuing resolution, reporting of enterprise-level funds control and distribution of appropriated funding.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Enterprise Funds Distribution (EFD)	3.661	6.266	3.173
Description: EFD will distribute funds to the Military Departments and the Defense Agencies.			
FY 2018 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 09 / Enterprise Funds Distribution
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Continue development and deployment of EFD Phase 2 requirements based on user group migration strategy. Deploy user migration wave 1</p> <p>FY 2019 Plans: Continue development and deployment of EFD Phase 2 requirements based on user group migration strategy. Deploy user migration wave 2</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: FY2019 is lower due to the majority of EFD's development to be completed in FY2018 and the primary focused to be on Wave II user migration and their required changes.</p>			
Accomplishments/Planned Programs Subtotals	3.661	6.266	3.173

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The EFD strategy is to use a “single acquisition to full capability,” commercial-off-the-shelf (COTS) solution (Momentum software). The effort needed to ensure EFD is fully implemented for all appropriation data for the Military Services and Defense Organizations has led to a full deployment date of September 2016.

E. Performance Metrics

For performance, the objective is that 100% of the SFIS elements are SFIS compliant at FD.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency Date: February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 09 / Enterprise Funds Distribution
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Savantage Solutions	Option/ FP	Savantage Solutions : Rockville, MD	14.158	0.000		0.000		0.000		0.000		0.000	0.000	14.158	14.158
TeraThink Corporation	C/FFP	TeraThink Corporation : Reston, VA	1.710	3.661	Dec 2016	6.266	Dec 2017	3.173	Dec 2018	0.000		3.173	Continuing	Continuing	Continuing
TBD	C/FFP	TBD : TBD	1.492	0.000		0.000		0.000		0.000		0.000	0.000	1.492	1.492
Subtotal			17.360	3.661		6.266		3.173		0.000		3.173	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.360	3.661	6.266	3.173	0.000	3.173	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 09 / Enterprise Funds Distribution

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Enterprise Funds Distribution (EFD)

Enterprise Funds Distribution (EFD)

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605080S / Defense Agencies Initiative (DAI) - Financial System
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	110.325	27.194	24.436	21.156	-	21.156	23.673	21.806	25.336	25.815	Continuing	Continuing
01: Defense Agencies Initiatives - Financial System	110.325	27.194	24.436	21.156	-	21.156	23.673	21.806	25.336	25.815	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 0491

A. Mission Description and Budget Item Justification

This program supports the Defense Agencies Initiative (DAI) Increments 2 and 3, Category I Defense Business Systems. Previous funding for DAI Increment 1, as well as, FY2013 4th Quarter Increment 2, were documented in the Defense Enterprise Business Systems program element 0605070S. Increment 3 will deliver new capabilities: (Defense Working Capital fund and Re-Sale accounting); and an application upgrade.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	30.457	24.436	40.300	-	40.300
Current President's Budget	27.194	24.436	21.156	-	21.156
Total Adjustments	-3.263	0.000	-19.144	-	-19.144
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.400	-			
• SBIR/STTR Transfer	-0.863	-			
• Inflation Adjustment	-	-	-0.344	-	-0.344
• Program Rephasing	-	-	-18.800	-	-18.800

Change Summary Explanation

Under the FY2017 CR, a portion of DAI's funding was provided to USTRANSCOM to continue business operations. Upon enactment, the USTRANSCOM funding is being returned to DIA resulting in the reprogramming amount owed to DAI for \$2.4M. FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.863M.

Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019. FY2019 development will complete developing Defense Working Capital Fund (DWCF) accounting requirements necessary to serve as core and meet DISA requirements, and DeCA Re-sale accounting requirements study (to be developed in FY 2020).

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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: <i>Defense Agencies Initiatives - Financial System</i>	110.325	27.194	24.436	21.156	-	21.156	23.673	21.806	25.336	25.815	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 0491												

A. Mission Description and Budget Item Justification

The DAI mission is to deliver auditable Chief Financial Officer (CFO) Act compliant business environments for Defense Agencies providing accurate, timely, authoritative financial data supporting the DoD goal of standardizing financial management practices improving financial decision support, and supporting audit readiness. Currently, Defense Agencies use several different non-compliant financial management systems supporting diverse operational functions and the warfighter in decision-making and financial reporting. These disparate, non-integrated systems do not meet statutory requirements to produce timely, auditable reports.

The DAI program modernizes the Defense Agencies' financial management processes by streamlining financial management capabilities, addressing financial reporting material weaknesses, and supporting financial statement auditability for the majority of agencies and field activities across the DoD. DAI will support a transformation of budget, finance, and accounting processes across participating defense agencies to help improve the quality of financial information, supporting financial auditability and decision-making. The DAI business solution, once implemented, will provide a near real-time, web-based system from a ".mil" environment of integrated business processes that will enable in excess of 84,000 Defense Agency financial managers, program managers, auditors, and Defense Finance and Accounting Service (DFAS) representatives to make sound financial business decisions.

The DAI implementation approach is to deploy a standardized system solution that is consistent with requirements in the Federal Financial Management Improvement Act (FFMIA) and the DoD Business Enterprise Architecture (BEA), while leveraging the out-of-the-box capabilities of the selected Commercial-Off-the-Shelf (COTS) product, Oracle e-Business Suite (EBS), Release 12.2.5 (R12). DAI implemented an Oracle Office of Management and Budget Financial Systems Integration Office (FSIO) qualified COTS financial management business solution with common business processes and data standards. The Program Management Office (PMO) will not develop any objects that are included in core COTS software or services (i.e. vendor data from Federal authoritative source).

DAI supports the 2014 Quadrennial Defense Review (QDR) Strategy 5, "Reform the business and support functions of the Defense enterprise". DAI is also aligned to the DOD Agency Strategic Fiscal Years 2015-2018, Goal 5: Reform and Reshape the Defense Institution, Key Strategic Initiative - Improving competitiveness through accountability and efficiency and SO 5.2: Improve financial processes, controls, and information via audit readiness. The objective of the DAI system is to achieve auditable, CFO Act compliant business environments for the Defense Agencies with accurate, timely, authoritative financial data.

The primary goal is to deploy a standardized system solution to improve overall financial management and comply with BEA, Standard Financial Information Structure (SFIS)/Standard Line of Accounting (SLOA), and Office of Federal Financial Management (OFFM) requirements. Common business functions within budget execution include the Department's BEA End to End (E2E) business processes: Cost Management; Budget to Report; Procure to Pay (P2P); Acquire to Retire (real property

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lifecycle accounting only); Hire to Retire (Time and Labor reporting only); and Order to Cash. Release (Rel) 1 provided an application upgrade to Oracle R12 along with (P2P) enhancements facilitating SFIS/SLOA compliance and automated Time and Labor absence management. Rel 2 introduced Grants Financial Management accounting and the start of a phased implementation of Governance, Risk and Compliance (GRC) capabilities. Future capabilities will support Rel 3 Direct Treasury Disbursing and Budget Formulation as well as Rel 4 Defense Working Capital Fund accounting, and Re-Sale Accounting (for Defense Commissary Agency (DeCA)).

DAI is currently implemented at 22 Defense Agencies and the Office of the Under Secretary of Defense, Comptroller, (OUSD(C)) and supports over 39,322 users. The program office is also responsible for operational sustainment of the system. Funds are required for additional government and contractor support, licenses, maintenance, and hardware to accomplish the remaining capability developments and organizational deployments, and initiate the annual Statement on Standards for Attestation Engagements No. 18 (SSAE 18) assertion packages. In 2017, the system received an unqualified SSAE 18 report.

The benefits of DAI are:

- Common business processes and Enterprise data standards (i.e., SFIS, SLOA, Procurement Data Standard (PDS) and Procurement Request Data Standard (PRDS));
- Access to real-time financial data transactions;
- Significantly reduced data reconciliation requirements;
- Enhanced analysis and decision support capabilities; and
- Use of United States Standard General Ledger (USSGL) Chart of Accounts to resolve DoD material weaknesses and deficiencies.

The DAI PMO completed the Oracle R12 application upgrade. The DAI PMO also provides system integration services that include: acquisition/financial management, project management; blueprinting; design, build, and unit test; developing required Reports, Interfaces, Conversions, Extensions, Forms and Workflows (RICE-FW) objects; testing (cyber security/information assurance, integration, functional, performance, conversion, user acceptance, operational); end-user training (train the trainer/ change management preparing the users for the cross functional skills and awareness needed to perform well with an integrated enterprise resource planning system); system deployment; conversion; information assurance; sustainment; data service; help desk support; as well as studies and analysis support.

DLA Information Operations provides the program executive officer, program manager, and PMO staff. The DAI PMO relies on DLA Acquisition for most contracting. Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers (DECCs) provide application, development and test as well as Continuity of Operations (COOP) hosting, Technical Contracting Office for development task orders, and the Joint Interoperability Test Command for Interoperability testing. The DAI PMO serves as systems integrator. Contracted subject matter experts configure COTS to provide compliant business processes.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Agencies Initiative (DAI) - Financial System	27.194	24.436	21.156
FY 2018 Plans:			
In FY 2018, the DAI PMO will:			
<ul style="list-style-type: none"> • Field DAI Increment 2 Rel 4 to users at two large agencies (over 9,409 users). • Development/Testing for DISA General Fund (GF) agency unique requirements and begin study/development of DWCF capabilities. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> • Study/develop Agency unique requirements for DISA. • Work instructions and training materials. • Conduct Follow-on Test and Evaluation (FOT&E) event with using Agencies, which completes the DAI INC 2 cycle of independent Operational Assessments. • Support the FM & time/labor for over 45k users at over 22 Agencies, Field Activities and organizations. • Support the DoD Information Assurance Certification and Accreditation Risk Management Framework (RMF) process to support actions included in the Designated Authorizing Authority required Plan of Actions and Milestones including an independent Federal Information Systems Controls Audit Manual (FISCAM) Test of Design/Test of Effectiveness to result in a DAA decision to award an Authority to Operate. • Continue to implement the Governance, Risk and Compliance (GRC) capabilities by expanding Enterprise controls: Configuration, Access, Prevention & Transactions supporting audit findings, recommendations & corrective action plans (CAPs). • Maintain the technical operation including: application of DISA Security Technical Implementation Guides, hardware & software currency for servers operating systems, middleware & applications including patches; overseeing internal processes within the DISA Enterprise Computing Center (DECC) enclaves; & the daily operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services. • Conduct regular adversarial assessments, RMF continuous monitoring including code scans, an independent Cyber Economic Vulnerability Assessment (CEVA) and a Cooperative Vulnerability and Penetration Assessment (CVPA). • Obtain or maintain an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid. • The Program will also perform developmental, operational and Cyber security testing with independent third parties under Office of the Secretary of Defense oversight. The Defense Logistics Agency will contract for an independent public accounting firm to conduct the annual FFMA and SSAE 18 assessments and conduct Cyber security assessments on the system. <p>FY 2019 Plans: In FY 2019, the DAI PMO will:</p> <ul style="list-style-type: none"> • Field DAI Increment 3 Rel 1 General Fund (GF) accounting to users at a large agency (over 5,722 users). • Development/Testing for DWCF and agency unique requirements and complete the study of 4th Estate common/core capabilities. • Study Agency unique requirements for DeCA. • Work instructions and training materials. • Conduct an independent operational assessment (OA) of DAI INC 3, REL 1. • Support the Financial Management (FM) & time/labor operations for over 45k users at over 23 Agencies, Field Activities and organizations. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> • Support the DoD RMF process to support actions included in the Designated Authorizing Authority required Plan of Actions and Milestones including an independent FISCAM Test of Design/Test of Effectiveness to result in a DAA decision to award an Authority to Operate. • Continue to implement the GRC capabilities by expanding Enterprise controls: Configuration, Access, Prevention & Transactions supporting audit findings, recommendations & CAPs. • Maintain the technical operation including: application of DISA Security Technical Implementation Guides, hardware & software currency for servers operating systems, middleware & applications including patches; overseeing internal processes within the DECC enclaves; & the daily operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services. • Conduct regular adversarial assessments, RMF continuous monitoring including code scans, an independent Cyber Economic Vulnerability Assessment and a Cooperative Vulnerability and Penetration Assessment. • Obtain or maintain an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid. • The Program will also perform developmental, operational and Cyber security testing with independent third parties under Office of the Secretary of Defense oversight. The Defense Logistics Agency will contract for an independent public accounting firm to conduct the annual FFMA and SSAE 18 assessments and conduct Cyber security assessments on the system. <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> FY 2019 development will complete developing DWCF accounting requirements necessary to serve as core and meet DISA requirements.</p>			
Accomplishments/Planned Programs Subtotals	27.194	24.436	21.156

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

DAI is being developed and implemented using an evolutionary/incremental strategy including major annual software releases to accommodate upgrades as required by changes to the Department's BEA including new laws, regulations and policies as governed by its Functional Sponsor and Milestone Decision Authority (MDA).

In the Acquisition Decision Memorandum (ADM) of September 23, 2013, the MDA placed DAI Increment 1 in sustainment. Increment 2 addressed the Commercial Off The Shelf (COTS) application upgrade. The upgrade was completed (January 2015); therefore, Increment 2 Rel 1 subsumed Increment 1 for all users. A new ADM in June 2017 introduced Increment 3. When Increment 3, Rel 1 goes live, it will subsume Increment 2; therefore, only one DAI production baseline exists at any point in time.

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E. Performance Metrics

The following performance metrics will be performed on the DAI system:

Functionality: Financial system performance. PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA in scope requirements for Defense Financial Management Improvement Guidance (DFMIG) and other laws regulations and policy. Objective: Substantial compliance.

Program Conformance to BEA Processes, Data Standards, and Business Rules. The PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA. Objective: Substantial compliance.

Net Ready Key Performance Parameter (NR-KPP)

Attribute (Att) A - Support net-centric DoD military operations

Mission: Transform the budget, finance, and accounting operations of the DoD Agencies to achieve accurate and reliable financial information in support of financial accountability and effective and efficient decision making throughout the Defense Agencies in support of the missions of the warfighter.

A.1. Budget to Report (B2R). DAI provides General Ledger, Trial Balance, Budget Execution, and Financial Reporting Capabilities.

DAI will measure the percentage of successful attempts to:

- * Generate and transmit Trial Balance Reports. Objective-95%;
- * Receive budget information from agency-specific systems, to support budget execution. Objective-95%; and
- * Generate and transmit reports to support period end processing procedures. Objective-95%

A.2 Procure to Pay (P2P). DAI provides the capability to Order Materials and Services (Commitments), Record Purchases and Contract Information (Obligations) Pay Bills (Accounts Payable), and Create Ready to Pay File.

DAI will measure the percentage of successful attempts to:

- * Exchange contract, obligation, receipt and invoice information with external systems to support procurement processes. Objective-95%;
- * Receive Purchase Card information from external systems to manage government purchase cards (P-Cards). Objective-95%;
- * Exchange data across agencies to support intergovernmental Purchase Request (PR) processes. Objective-95%;
- * Receive travel related data from external systems to support travel financial accounting events. Objective-95%; and
- * Exchange miscellaneous payment information with trading partners. Objective-95%.

A.3. Order to Cash (O2C). DAI provides the capability to Receive Customer Orders, Record Work Performed on the orders, Bill Customers, and Track Accounts Receivable.

DAI will measure the percentage of successful attempts to:

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<p>* Exchange data with external systems to support management of customer orders. Objective-95%;</p> <p>* Exchange receivables data with external systems. Objective-95%; and</p> <p>* Manage exchange collections data with external systems. Objective-95%.</p> <p>A.4. Acquire to Retire (A2R). DAI provides the capability to record Asset Acquisition, Depreciation, and Disposal. DAI will measure the percentage of successful attempts to:</p> <p>* Receive asset creation information from external systems. Objective-95%;</p> <p>* Accumulate and transmit costs incurred for Capital Assets on Construction in Progress (CIP) and Work in Progress (WIP) projects. Objective-95%;</p> <p>* Generate and transmit property accounting information. Objective-95%;</p> <p>* Receive property maintenance data from external systems. Objective-95%; and</p> <p>* Receive disposal of assets information from external systems. Objective-95%.</p> <p>A.5. Cost Management (formerly Cost Accounting). DAI provides Cost Accounting and Allocation Capabilities. DAI will measure the percentage of successful attempts to:</p> <p>* Receive Project Budgets from external systems. Objective-95%; and</p> <p>* Receive cost data to support cost collection processes. Objective-95%.</p> <p>A. 6. Hire to Retire (H2R). DAI provides Civilian, Military, and Contractor Time and Labor capabilities. DAI will measure the percentage of successful attempts to:</p> <p>* Exchange employee and timekeeping information with external systems. Objective-95%; and</p> <p>* Process and send payroll data to external systems. Objective-95%.</p> <p>NR-KPP Att B - Managed in the Network</p> <p>1) Type of Networks that are connected:</p> <ul style="list-style-type: none"> - The DAI application supports multiple Defense Agencies, and thus is accessible from multiple network points. A typical user accesses the application via the web browser from his/her agency specific LAN/WAN and/or local site firewall configurations, traversing through the Non-Classified Internet Protocol Routing Network (NIPRNet) to reach the secure DAI application hosted within the DoD Demilitarized Zone (DMZ) which is controlled and managed by DISA. - The DAI production application is hosted in a DISA DECC environment located in Ogden, UT and is managed by DAI Program Management Office <p>2) Measures of Performance (MOPs) to measure network entrance and management performance:</p> <p>a) Network related (DISA) – as per DISA Catalog of Services</p> <ul style="list-style-type: none"> -Interactive Availability - Portion of network/system controlled by DISA CSD available to the partner during the interactive window -Batch Throughput – Completion rate and delivery by specified time during batch window specified in SLA <p>b) Database related (DAI Program Management Office)</p>		

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<p>-System Availability -On Line user system response</p> <p>3) Network Management: -The Agency (user) being supported is responsible for the communications infrastructure necessary for leaving their location to connect users to the NIPRNet -DISA is responsible for communications on NIPRNet between the end user and the main DAI environment -DAI Program Management Office is responsible for activities occurring within the application and the Oracle Database</p> <p>4) Systems Management -NIPRNet and Infrastructure - Centralized within DISA CSD -DAI System – centralized within DAI Program Management Office</p> <p>5) Network Configuration Parameters – N/A (within the realm of DISA management) DAI will measure the percentage of success for: * Supports secure Internet/NIPRNET access to solution. Interactive Availability. Objective-98.5%; * Supports secure Internet/NIPRNET access to solution. Batch Throughput. Objective-95%; * Provides adequate system response and availability to support operations. System Availability. (Condition: 5000 users/hour) Objective-95%; and * Provides adequate system response and availability to support operations. On-line system response. (Condition: 5000 users/hour) Objective-95%.</p> <p>NR-KPP Att C - Effectively Exchange Information. DAI will satisfy all top-level critical Information Exchange Requirements (IERs) with all required DoD Enterprise, DFAS, Defense Agencies, and Federal Systems, as documented in SV-6. There are 47 data exchanges with other systems. The objectives are 100% for accuracy and ten seconds to 1 day for timeliness. Additional details available upon request.</p> <p>Major Performers:</p> <p>CACI Inc Federal Chantilly, VA Global Model Implementation and Compliance Support to DAI</p> <p>CACI Inc Federal Chantilly, VA DAI Implementation Support Services</p> <p>CACI ISS, Inc Fairfax, VA</p>		

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Infrastructure Support		
International Business Machines Corporation Reston, VA DAI Global Model Development for Procure to Pay (P2P), Order to Cash (O2C), Budget to Retire (B2R), and Customer Application Development (CAD)		
CACI Inc Federal Chantilly, VA DAI Global Model Development for Acquire to Retire (A2R), Cost Accounting (CA), and Time and Labor (T&L)		
Mythics Inc DBA Virginia Beach, VA Oracle CLM and Purchase Software		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DAI Compliance Support	Option/CPFF	CACI Inc Federal : Chantilly, VA	18.540	7.143	Jun 2017	6.489	Jun 2018	-		-		-	0.000	32.172	0.000
DAI Compliance Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		0.000		6.683	Jun 2019	-		6.683	Continuing	Continuing	Continuing
DAI Implementation Support	Option/CPAF	CACI Inc Federal : Chantilly, VA	15.600	6.651	Mar 2017	6.151	Mar 2018	-		-		-	0.000	28.402	0.000
DAI Implementation Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		0.000		6.336	Mar 2019	-		6.336	Continuing	Continuing	Continuing
DAI Infrastructure Support	Option/FFP	CACI ISS Inc : Fairfax, VA	8.183	3.472	May 2017	2.821	May 2018	-		-		-	0.000	14.476	0.000
DAI Infrastructure Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		0.000		1.985	May 2019	-		1.985	Continuing	Continuing	Continuing
Global Model P2P	C/FFP	IBM : Bethesda, MD	19.212	2.715	Aug 2017	-		-		-		-	0.000	21.927	0.000
Global Model P2P Follow-on	C/TBD	TBD : TBD	0.000	0.000		3.418	Aug 2018	-		-		-	Continuing	Continuing	Continuing
Global Model A2R	C/CPFF	CACI Inc Federal : Chantilly, VA	9.012	1.134	Apr 2017	-		-		-		-	0.000	10.146	0.000
Global Model A2R Follow-on	C/TBD	TBD : TBD	0.000	0.000		2.333	Apr 2018	2.403	Apr 2019	-		2.403	Continuing	Continuing	Continuing
DAI Data Conversion Support	Option/FFP	Terathink : Reston, VA	2.512	0.345	Mar 2017	-		-		-		-	0.000	2.857	0.000
DAI Data Conversion Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		-		-		-		-	Continuing	Continuing	Continuing
Requirements Management (RM) Support	MIPR	DISA : Fort Meade, MD	0.876	0.000	Oct 2017	0.237	Oct 2018	0.159	Oct 2019	-		0.159	Continuing	Continuing	Continuing
Global Model P2P Option 1 Increase	C/FFP	IBM : Bethesda, MD	0.000	0.000		-		-		-		-	0.000	0.000	0.000
Oracle Time & Labor Software License and Maintenance	C/FP	Mythics, Inc. : Virginia Beach, VA	0.000	1.020	May 2017	-		-		-		-	0.000	1.020	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DCPDS/DAI Interface File Changes	MIPR	DLA Finance : Fort Belvoir, VA	0.000	0.014	Feb 2017	0.013	Feb 2018	0.010	Feb 2019	-		0.010	Continuing	Continuing	Continuing
Serena Capability	MIPR	TBD : TBD	0.000	0.000		-		-		-		-	Continuing	Continuing	Continuing
Global Model CAD	C/CPFF	CSC : Falls Church, VA	3.205	-		-		-		-		-	0.000	3.205	0.000
Jaws Professional Licenses	C/FFP	Immix : McLean, VA	0.017	-		-		-		-		-	0.000	0.017	0.000
Oracle Advanced Compression Licenses	TBD	TBD : TBD	1.622	-		-		-		-		-	0.000	1.622	0.000
Oracle Contract Lifecycle Management Licenses	C/FFP	Mythics Inc : Virginia Beach, VA	7.408	-		-		-		-		-	0.000	7.408	0.000
Oracle Licenses	MIPR	DISA : Pensacola, FL	5.446	-		-		-		-		-	0.000	5.446	0.000
Kurzweil 5000 508 Assistive Tech Licenses	C/FFP	Envision Technology Inc. : Bethesda, MD	0.008	-		-		-		-		-	0.000	0.008	0.000
Dragon Naturally Speaking 508	C/FFP	Red River Computer Co : Claremont, NH	0.007	-		-		-		-		-	0.000	0.007	0.000
DISA/DITCO Delinquent Balance	MIPR	DISA DITCO : Scott AFB, IL	0.017	-		-		-		-		-	0.000	0.017	0.000
DBTA Section 1553	MIPR	DFAS : Columbus, OH	0.377	-		-		-		-		-	0.000	0.377	0.000
Development Activities	C/TBD	TBD : TBD	0.000	-		0.000		-		-		-	Continuing	Continuing	Continuing
Subtotal			92.042	22.494		21.462		17.576		-		17.576	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Estimated SBIR/STTR:	TBD	TBD : TBD	0.000	1.112		0.892		0.785		-		0.785	Continuing	Continuing	Continuing
Subtotal			0.000	1.112		0.892		0.785		-		0.785	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / Defense Agencies Initiative (DAI) - Financial System	Project (Number/Name) 01 / Defense Agencies Initiatives - Financial System
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DISA Hosting: Test and Development	MIPR	DISA : Pensacola, FL	10.242	2.696	Oct 2016	-		0.894	Oct 2018	-		0.894	Continuing	Continuing	Continuing
Interoperability	MIPR	JITC : Fort Meade, MD	3.273	0.134	May 2017	0.281	May 2018	0.290	May 2019	-		0.290	Continuing	Continuing	Continuing
Performance and Regression Testing	MIPR	JITC : Fort Huachuca, AZ	1.936	0.710	Oct 2016	0.721	Oct 2017	0.600	Oct 2018	-		0.600	Continuing	Continuing	Continuing
Operational Test and Evaluation	MIPR	JITC : Fort Huachuca, AZ	2.749	0.000	Dec 2016	0.982	Dec 2017	1.011	Dec 2018	-		1.011	Continuing	Continuing	Continuing
DCPS Testing	MIPR	DFAS : Indianapolis, IN	0.083	0.048	Oct 2016	0.098	Oct 2017	0.000	Oct 2018	-		0.000	Continuing	Continuing	Continuing
Hosting Activities	TBD	TBD : TBD	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			18.283	3.588		2.082		2.795		-		2.795	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	110.325	27.194	24.436	21.156	-	21.156	Continuing	Continuing	N/A

Remarks

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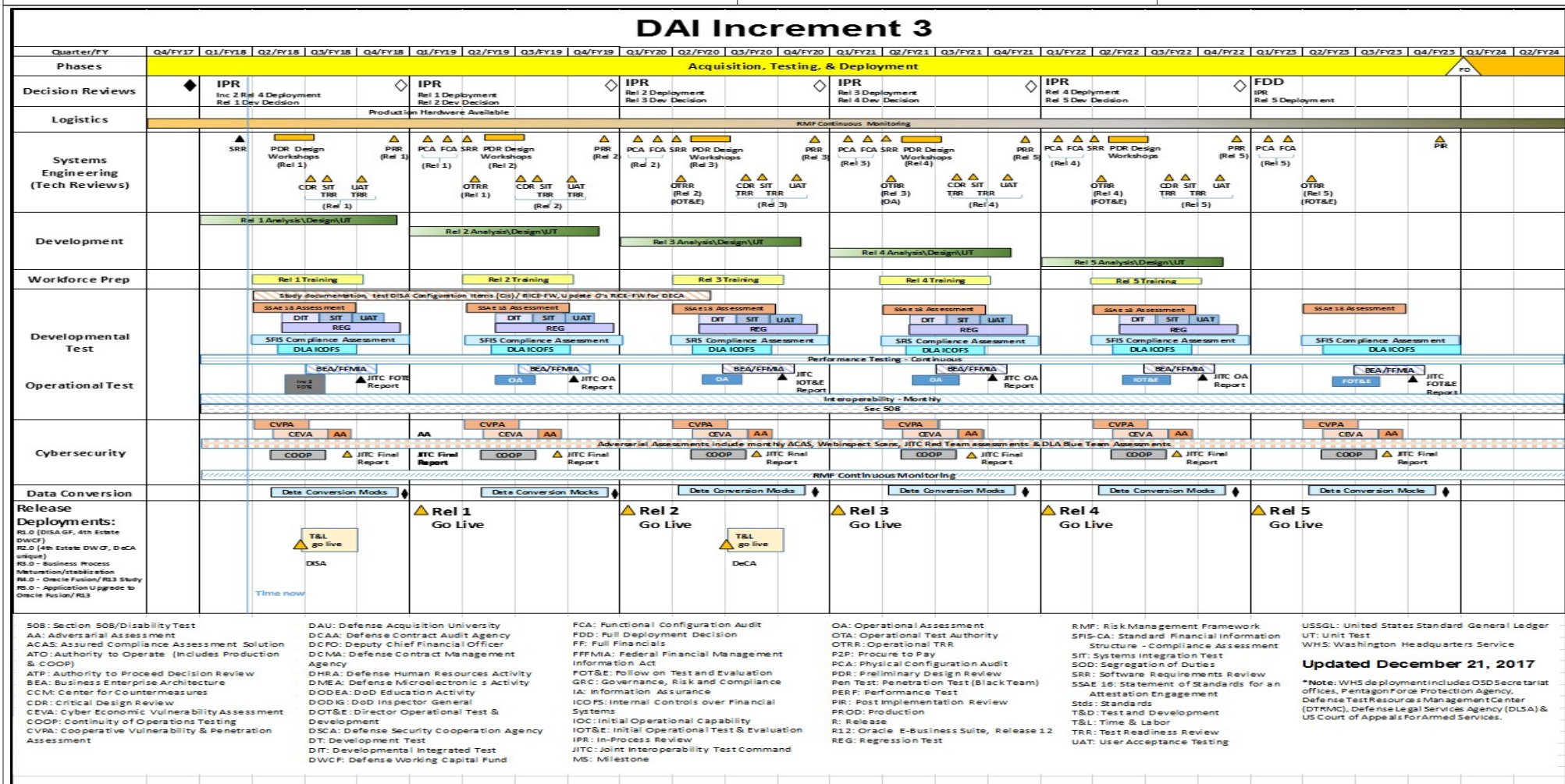
Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Logistics Agency

Date: February 2018

Appropriation/Budget Activity
0400 / 5

R-1 Program Element (Number/Name)
PE 0605080S / Defense Agencies Initiative
(DAI) - Financial System

Project (Number/Name)
01 / Defense Agencies Initiatives - Financial
System



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	Project (Number/Name) 01 / <i>Defense Agencies Initiatives - Financial System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Defense Agencies Initiative (DAI)</i>				
Defense Agencies Initiative (DAI)	1	2014	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	27.815	4.768	13.475	10.731	-	10.731	6.609	1.769	1.805	1.839	Continuing	Continuing
01: <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>	27.815	4.768	13.475	10.731	-	10.731	6.609	1.769	1.805	1.839	Continuing	Continuing

A. Mission Description and Budget Item Justification

The primary objective of Defense Retired and Annuitant Pay System 2 (DRAS 2) is to establish and maintain a modern retiree and annuitant pay system featuring automated, market technology in place of selected manual processes.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	7.949	13.475	2.226	-	2.226
Current President's Budget	4.768	13.475	10.731	-	10.731
Total Adjustments	-3.181	0.000	8.505	-	8.505
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.181	-			
• FY 2017 Request for Additional Appropriation Not Addressed	-3.000	-			
• Increased Program Requirements	-	-	8.505	-	8.505

Change Summary Explanation

FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.181M. In FY2017, DRAS2 request for additional appropriations was not addressed.

The program increase in FY2019 in the amount of \$8.505M is for system development, testing, training and hosting activities.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>	Project (Number/Name) 01 / <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>	27.815	4.768	13.475	10.731	-	10.731	6.609	1.769	1.805	1.839	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The primary objective of DRAS 2 is to establish and maintain a modernized retired military pay accounts. DRAS 2 will replace the current Defense Retiree and Annuitant Systems (DRAS) and selected manual processes with proven state of the market technology. This modernization will allow for the consolidation of disparate DRAS systems and business processes, the reduction of system redundancies and inefficiencies, and increased customer satisfaction.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Retired and Annuitant Pay System (DRAS) 2	4.768	13.475	10.731
FY 2018 Plans: Issue a Task Order for: - Final Build development - Perform System Integration, Interoperability, User Acceptance Testing, and Parallel Operations Testing - User Training - Establish production hosting environment and perform Cyber Defense Security activities.			
FY 2019 Plans: The system will transition to DFAS during FY2020.			
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease in FY2019 as a result of reduced program requirements.			
Accomplishments/Planned Programs Subtotals	4.768	13.475	10.731

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

DRAS2 achieved Milestone B in August 2016 and entered into the Engineering, Development, and Production Phase of the Acquisition Lifecycle. DRAS2 achieved a successful Critical Design Review in December 2017 and is now proceeding to System Development. DRAS2 is scheduled for Full Deployment during FY20.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>	Project (Number/Name) 01 / <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>

E. Performance Metrics N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)	Project (Number/Name) 01 / Defense Retired and Annuitant Pay System 2 (DRAS)
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DRAS2 System Development and Integration	Option/IDIQ	CSRA : Chantilly, VA	13.096	0.000	Oct 2018	4.280	Jan 2018	7.931	Oct 2018	0.000		7.931	Continuing	Continuing	Continuing
DRAS2 COTS License Purchase	Option/IDIQ	CSRA/Oracle : To be Determined	10.443	3.586	May 2017	0.000		0.000		0.000		0.000	Continuing	Continuing	14.110
DISA Hosting	MIPR	Virtual Operating Environment : Mechanicsburg, PA	0.721	0.332	Nov 2017	1.200	Jan 2018	1.000	Jan 2019	0.000		1.000	Continuing	Continuing	2.590
Transaction Services Interface Design	Option/IDIQ	Northrop Grumman DLA Transaction Services : Chambersburg, PA	2.900	0.850	May 2016	0.452	Nov 2017	0.000		0.000		0.000	Continuing	Continuing	4.162
Transaction Services Interface Development & Testing	Option/IDDQ	Northrop Grumman DLA Transaction Services : Chambersburg, PA	0.655	0.000		0.900	Jul 2018	0.900	Jul 2019	0.000		0.900	Continuing	Continuing	1.910
DRAS2 System Development & Integration	Option/IDIQ	CSRA : Chantilly, VA	0.000	0.000		6.643	May 2018	0.000		0.000		0.000	Continuing	Continuing	6.643
Interoperability Testing	MIPR	Joint Interoperability Test Command (JITC) : Fort Meade, MD	0.000	0.000		0.000		0.900	Oct 2018	0.000		0.900	Continuing	Continuing	0.900
Subtotal			27.815	4.768		13.475		10.731		0.000		10.731	Continuing	Continuing	N/A

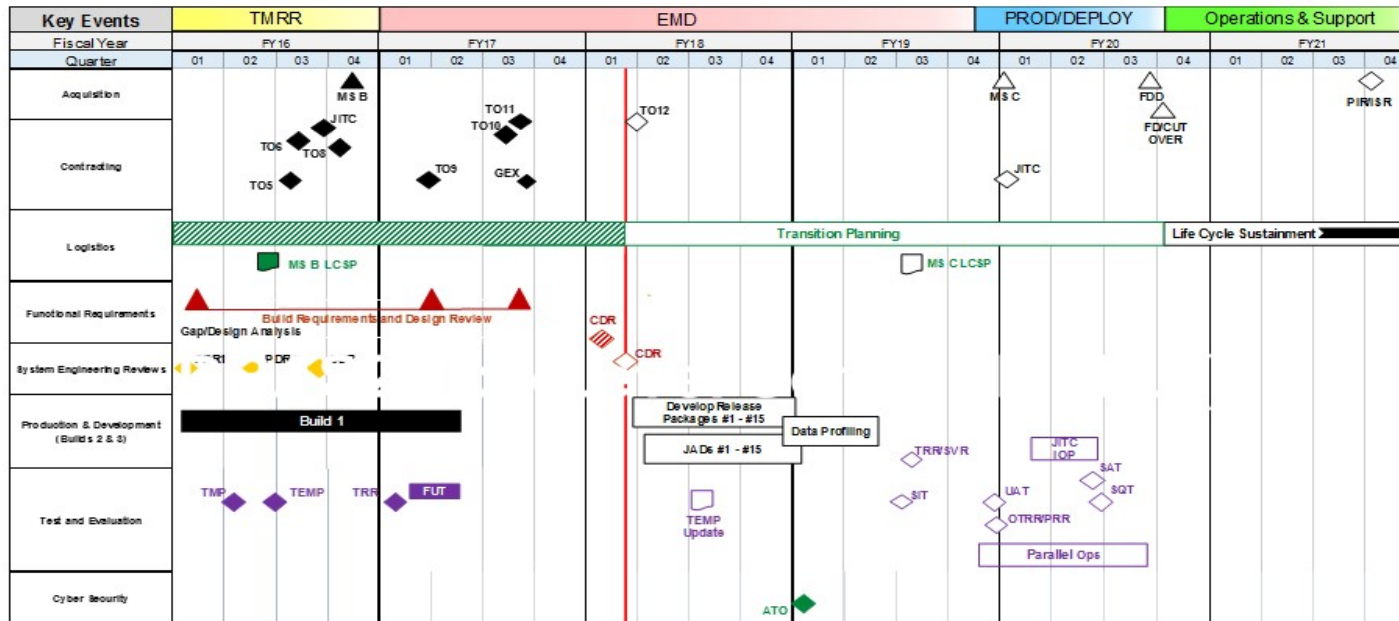
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	27.815	4.768	13.475	10.731	0.000	10.731	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)	Project (Number/Name) 01 / Defense Retired and Annuitant Pay System 2 (DRAS)

DRAS2 Top Level Schedule (TLS)



Note: The IMS is currently being mitigated for PM approval based on DLA Contracts Office guidance pertaining to IDIQ contract limitations during FY19 & FY20. Milestone C and Full Deployment dates reflected are tentative.

- △ Milestone Decision
 - ◇ Decision Point
 - ◆ Completed
 - Task Timeline (Planned)
 - ▨ Partial Progress Indicator
 - Document Review
- MS B – Milestone B MS C – Milestone C FD – Full Deployment IATT – Interim Authority To Test ATO/ATC – Authority To Operate/Authority to Connect TMRR – Technology Maturation and Risk Reduction EMD - Engineering and Manufacturing Development PROD/DEPLOY – Production and Deployment Development SI – System Integrator TO – Task Order SRR – System Requirements Review SFR – System Functional Review PDR – Preliminary Design Review CDR – Critical Design Review - T-PDR Tailored Preliminary Design Review - T-CDR Tailored Critical Design Review (Build 1 – 3) OTRR – Operational Test Readiness Review PRR – Production Readiness Review ISR – In Service Review SEP – System Engineering Plan TMP – Test Management Plan TEMP – Test & Evaluation Master Plan SAT – System Acceptance Testing SIT – System Integration Testing TRR – Technology Readiness Review SVR – System Verification Review SQT – System Qualification Testing UAT – User Acceptance Testing – DTE – Developmental Test & Evaluation. (SwQT) – Software Quality Testing – Regression, System Integration, Compliance and Functional User Testing) - JITC – Joint Interoperability Test Command Proto CRP – Prototype Conference Room Pilot 2, 4, 6

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	23.043	4.554	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
01: <i>Small Business Innovative Research</i>	23.043	4.554	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Logistics Agency's (DLA's) ability to deliver Americans the right logistics solution in every transaction requires more than successful management of the Department's wholesale supplies and suppliers. It requires supply chain excellence. Our military's ability to generate and sustain combat readiness indefinitely, anywhere on the globe requires that DLA-managed materiel flow seamlessly and as needed from the nation's industrial base to where it is ultimately used.

DLA's Small Business Innovative Research (SBIR) program seeks to solicit innovative research and development proposals from the small business community to address DLA's strategic and operational requirements. All selections shall demonstrate and involve some technical risk with yet to be determined technical feasibility. Phase I proposals should demonstrate the feasibility of the proposed technology and provide a strong business case for Phase II investment for a prototype or at least a proof-of-concept demonstration. A favorable return on investment and commercialization potential have a strong influence on Phase II selections.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	4.554	0.000	0.000	-	0.000
Total Adjustments	4.554	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	4.554	-			

Change Summary Explanation

FY2017 Small Business Innovation Research and Small Technology Transfer taxes for DLA programs amounted to \$4.554M which established the baseline or this program element.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>			Project (Number/Name) 01 / <i>Small Business Innovative Research</i>				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
01: <i>Small Business Innovative Research</i>	23.043	4.554	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies with a defense application as well as a commercial value. The SBIR and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future DLA operational and sustainment requirements. Dual-use means the technologies will be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new DLA technologies, and as a route to national economic growth through new commercial products. DLA will conduct the competition as well as award and manage the contracts.

The DLA's SBIR/STTR investments are divided into multiple Research Areas identified from within several DLA Elements:

J6 R&D

- Nuclear Enterprise Support Office (NESO) Alternative Sources of Supply
- Additive Manufacturing Technologies, Process Controls, and Supply Chain
- Advanced Battery Manufacturing
- Advanced Aircraft Braking Systems
- Anti-Counterfeiting Technologies
- Medical 3D Printing of Prosthetics
- Seamless Self Sealing Fuel Bladders and Inflatables
- Strategic Materials Rare Earth Element Source Development
- Warehouse Modernization Technologies
- Subsistence Supply Chain Solutions
- Land & Maritime (L&M) Alternative Sources of Supply
- US Navy LCAC Power Supply Source Development
- US Air Force F-107 Engine Replacement Parts Source Development

DMEA

- Advanced microelectronics concepts, technologies, and applications

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>	Project (Number/Name) 01 / <i>Small Business Innovative Research</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Title: SBIR Accomplishments/Plans</p> <p>FY 2018 Plans: DLA SBIR/STTR: To continue execution of all active Phase I and Phase II SBIR/STTR Projects. In the DOD-wide 2017.3 and 2018.1 BAA's (Broad Agency Announcements), DLA expects twelve new topics. Anticipate the selection of one to three topics per area which will exhaust the FY 18 DLA SBIR funds. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards. DLA expects to award 12 new Phase II award. All Phase II awards utilize OSD/OSBP funding (\$12M) per Support Agreement . Continue execution of all active Phase I STTR projects. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards. Expect to award a single Phase II in early FY18.</p> <p>DMEA SBIR/STTR: DMEA will continue execution of all active SBIR projects. All active Phase I projects have the opportunity to progress to Phase II. DMEA will begin to study the feasibility of a high-brilliance 9KeV x-ray source. DMEA will complete prototype development for a broadband quadrature mixer with integrated I/Q mismatch calibration, and a nano-resolution 3D integrated circuit reconstruction system</p> <p>FY 2019 Plans: DLA SBIR/STTR: Continue execution of all active Phase I and Phase II SBIR/STTR Projects. Work with other R&D Programs and other divisions with DLA to identify requirements that meet DLA's long and short term Strategic Objectives. Provide adequate guidance and mentorship to Phase II to projects to increase the likelihood of transition into government programs of record or commercial ventures.</p> <p>DMEA SBIR/STTR: DMEA will continue to seek innovative technical solutions to DoD microelectronics research and development needs and increase private-sector commercialization of these innovations.</p>	4.554	0.000	0.000
Accomplishments/Planned Programs Subtotals	4.554	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)
N/A
Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>	Project (Number/Name) 01 / <i>Small Business Innovative Research</i>

D. Acquisition Strategy

The SBIR acquisition process seeks to match projects with DLA's Strategic Focus Areas. The goal is to align SBIR/STTR developed technology with current and future DLA requirements. DLA solicits All new project execution work through the DoD SBIR Broad Agency Announcement (BAA). There are three separate solicitation periods throughout each year. (Jan-Feb, May-Jun, and Sep-Oct)

E. Performance Metrics

SBIR /STTR programs measure performance in two separate metrics

1. Phase Progression: In terms of progression from Phase I to Phase II, to Phase III, DLA deems each successive progression success. DLA Seeks to have a 30% progression from one Phase to the next as a minimum.
2. Commercialization: The Congressional language defines "Commercialization," which is clarified by the Office of Secretary of Defense Office of Small Business Programs (OSD/OSBP) Re-Authorization Policy Directive:
 - (Investment) The process of developing products, processes, technologies, or services; and/or
 - (Sales) The production and delivery (whether by the originating party or by others) of products, processes, technologies, or services for sale to or use by the Federal Government or commercial markets

The Small Business Administration and OSD/OSBP assign a Commercialization Index based on progression within the Phases and reported successes

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606942S / <i>Cyber Vulnerability Assessment and Mitigation</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	4.000	-	4.000	0.000	0.000	0.000	0.000	Continuing	Continuing
CVAM: <i>Cyber Vulnerability Assessment and Mitigation</i>	0.000	0.000	0.000	4.000	-	4.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

In section 1650 of Public Law 114-328, the National Defense Authorization Act (NDAA) for FY2017, the Congress mandated that the Department of Defense (DoD) conduct cyber vulnerability evaluations of critical military installations by December 31, 2019. The funding provided is for critical infrastructure assessments and mitigations. The Cyber Vulnerability Assessment and Mitigation program continues the cyber hardening of critical infrastructure for DLA Fuel Distribution by conducting cyber vulnerability assessments of current fuel distribution infrastructures.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	4.000	-	4.000
Total Adjustments	0.000	0.000	4.000	-	4.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Establishment	-	-	4.000	-	4.000

Change Summary Explanation

This is a new PE in FY 2019. This is a continuation of efforts funded within the management support for the Office of the Secretary of Defense PE 0604942D8Z Assessments and Evaluation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0606942S / <i>Cyber Vulnerability Assessment and Mitigation</i>	Project (Number/Name) CVAM / <i>Cyber Vulnerability Assessment and Mitigation</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
CVAM: <i>Cyber Vulnerability Assessment and Mitigation</i>	0.000	0.000	0.000	4.000	-	4.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In section 1650 of Public Law 114-328, the National Defense Authorization Act (NDAA) for FY2017, the Congress mandated that the Department of Defense (DoD) conduct cyber vulnerability evaluations of critical military installations by December 31, 2019. The funding provided is for critical infrastructure assessments and mitigations. The Cyber Vulnerability Assessment and Mitigation program continues the cyber hardening of critical infrastructure for DLA Fuel Distribution by conducting cyber vulnerability assessments of current fuel distribution infrastructures.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Cyber Vulnerability Assessment and Mitigation	0.000	-	4.000
FY 2019 Plans: Conduct cyber vulnerability assessments and mitigation on existing DLA Fuel Distribution Infrastructure			
FY 2018 to FY 2019 Increase/Decrease Statement: Program is established within DLA's RDT&E portfolio in FY2019.			
Accomplishments/Planned Programs Subtotals	0.000	-	4.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Vulnerabilities that are discovered through fuel distribution infrastructure assessments will have corrective action plans (CAPs) drawn up and mitigation efforts to close gaps will be initiated. 20% of CAPs will be closed within 1 year of discovery.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	131.718	15.984	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	147.702
0: <i>Prior Years</i>	109.875	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	109.875
17: <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	5.293	4.800	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.093
18: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	10.188	8.590	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.778
19: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	6.362	2.594	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.956

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) Industrial Preparedness Manufacturing Technology (IP ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. IP ManTech: Provides the crucial link between invention and product application to speed technology transitions. The program matures and validates emerging manufacturing technologies to support low-risk implementation in industry and Department of Defense (DoD) facilities, e.g. depots and shipyards. It addresses production issues early by providing timely solutions, thereby reducing risk and positively impacting system life cycle affordability by providing solutions to manufacturing problems before they occur.

Beginning in FY16, DLA ManTech was realigned into three Strategic Focus Areas (SFA): 1) Improving Industrial base Manufacturing Processes; 2) Maintaining Viable Sources of Supply; and 3) Improving Technical and Logistics Information.

- The Improving Industrial Base Manufacturing Processes SFA includes efforts to reduce industrial base material costs and production lead-times, while improving the quality of DLA managed products. This SFA subsumed the former supply chain oriented efforts in Subsistence Network (formerly known as the Combat Rations Network for Technology Implementation), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST), and Battery Network (BATTNET). New manufacturing processes within the scope of this SFA include emerging technologies such as Additive Manufacturing.
- Maintaining Viable Supply Sources includes efforts to assure the commercial industrial base can satisfy DLA materiel requirements. This SFA subsumed the Material Acquisition Electronics ManTech efforts. In the future, it will include other DLA efforts to maintain a viable industrial capability in areas such as Strategic Materials.
- The Improving Technical and Logistics Information SFA include efforts to improve and facilitate the exchange of engineering and logistics information among DLA industry partners and customers. It includes the MANTECH program Military Uniform System Technology (MUST) (formerly known as Customer Driven Uniform

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>
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Manufacturing) and the Defense Logistics Information Research Program from P.E. 0603712S. A primary focus of this SFA is to capitalize on the emerging “Model Based Enterprise” paradigm and the semantic web as an enabler to a logistics system that is smart and connected.

NOTE: The single supply chain exhibits were removed as they are now included within the SFA exhibits.

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	15.984	0.000	0.000	-	0.000
Total Adjustments	15.984	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	15.984	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Under the FY2017 CR, PE 30603680S was considered a new start so ManTech business was executed under this PE resulting in a reprogramming amount of \$15.984M. See PE 30603680S for data.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / Industrial Preparedness				Project (Number/Name) 0 / Prior Years			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
0: Prior Years	109.875	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	109.875
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Prior Year includes:

-Combat Rations (CORANET): \$6.632M. This project was realigned to Strategic Focus Area (SFA) Improving Industrial Base Manufacturing Processes. In 2015, DLA R&D expanded the Combat Rations Network (CORANET) program to include the "Subsistence Supply Chain (SUBNET)," which consists of the supply chain for military subsistence, including combat rations, field feeding equipment, garrison feeding and "market fresh." The goal of the SUBNET program is to maximize the capability and the capacity to produce and to encourage innovation and modernization needed to leverage the latest technologies.

-Customer Driven Uniform Manufacture (CDUM): \$18.499M. This project was realigned to SFA Improving Technical and Logistics Information. The CDUM program concluded in October 2014, and the results have been implemented DOD wide for recruit items. Residual CDUM projects have been transitioned into the Military Unique Sustainment Technology (MUST) Program. The MUST Program was initiated in 4th quarter 2014. The strategic objective of the DLA MUST program is to identify, develop and adopt technologies that can significantly reduce the lead-time between Individual Item and Equipment (IIE) development and sustainment from years to months. The Program focuses on technologies that will transform the military IIE supply chain from an "electronic paper" (i.e. PDF/MS Word) based, manual environment into a knowledge based automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end to end supply chain.

-Procurement Readiness Optimization - Advanced System Technology (PRO-ACT): \$12.409M. This project was realigned to SFA Improving Industrial Base Manufacturing Processes. The Castings consortium objective is to develop new materials and technologies for the metalcasting industry to help DLA improve the supply of parts that contain castings. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Cast parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are castings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the foundry industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the metal casting supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems. The increase in funding will help develop new technology for casting suppliers, including inspection, materials, modeling, and design.

-Procurement Readiness Optimization - Forging Advanced System Technology (PRO-FAST): \$5.627M. This project was realigned to SFA Improving Industrial Base Manufacturing Processes. The Forgings consortium objective is to develop new materials and technologies for the forging industry to help DLA improve the supply of parts that contain forgings. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed, these capabilities will support the forging industry, where the technologies will be tested and implemented in conjunction with the industry associations.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 0 / <i>Prior Years</i>
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These advancements will improve the forging supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems. The increase in funding will help develop new technology for forging suppliers, including new methods for making forge dies (typically the longest lead time and most expensive item) and for simulation of metal flow inside the forge die (to eliminate trial and error development of the die).

-Material Acquisition Electronics (MAE): \$58.396M. This project was realigned to SFA Maintaining Viable Supply Sources. The MAE program develops a capability to emulate most obsolete digital integrated circuits (ICs) in the Federal catalog using a single, flexible manufacturing line. DoD has estimated \$2.9 billion is spent every five years redesigning circuit card assemblies. Many of these circuit card redesigns are performed to mitigate IC obsolescence. Commercial ICs have short Product Life Cycles (often only 18 months). IC Manufacturers subsequently move on to later generations of ICs, leaving little to no sources for their previous IC products. DoD maintains weapons systems much longer than IC lifecycles, resulting in an obsolescence problem. In order to avoid costs and potential readiness issues associated with buying/carrying excess inventories acquired before commercial availability ceases, or redesigning the next higher assembly to mitigate the obsolete IC, DLA (as the manager of 88% of the IC Federal Stock Class) must have the capability to manufacture needed IC devices.

-Battery Network (BATTNET): \$8.312M. This project was realigned to SFA Improving Industrial Base Manufacturing Processes. The BATTNET program is focused on improving the supply and reducing the cost of procured batteries used in fielded weapon systems such as communication radios and armored vehicles. Batteries exhibit dynamic challenges for military logistics. BATTNET is a community of practice of battery supply chain members, engineering support activities, researchers, and users. BATTNET conducts R&D to address sustainment gaps and bridge technical solutions into higher MRLs for specific groups of batteries. For FY2014, DLA received 139,163 orders for 2.85 million batteries at \$183M net value - compared to FY13 \$176M and FY12 \$216M.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 17 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>17: Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	5.293	4.800	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.093
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Material Availability (MA) Strategic Focus Area (SFA) are R&D efforts undertaken with DLA’s industrial base to reduce material costs, reduce the length and variability of Production Lead-Times, assure the DLA managed products meet requirements, and continuously improve quality and reliability. Benefits of this SFA include lower material costs, lower inventory levels and more predictable Customer Wait Times, fewer quality deficiencies, and lower customer support costs. This strategic focus area includes within its scope the former Combat Rations Program, the Battery Program, the Castings and the Forgings programs.

This SFA is comprised of five roadmaps for Batteries, Subsistence Network, Castings, Forgings, and Additive Manufacturing.

The Battery network objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life, and lighter batteries with higher energy. The network conducts R&D initiatives to address sustainment gaps and bridge technical solutions into higher MRLs for specific groups of batteries. For FY2014, DLA received 139,163 orders for 2.85 million batteries at \$183M net value - compared to FY13 \$176M and FY12 \$216M. The Battery network focuses on projects to develop the production capability for advanced lithium-based non-rechargeable and rechargeable batteries to ensure the prompt and sustained availability, quality, and affordability of batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolved obsolescence issues; addressed surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and leveraged Service-level (Army, Navy, Air Force) and other governmental (DOE, DOT, NASA) R&D efforts to insert new technology and practices into the existing DLA battery inventory.

The Subsistence Supply Chain consists of military subsistence, which includes combat rations, field feeding equipment, garrison feeding and market fresh products. The Subsistence Network (SUBNET) program is a manufacturing technology program and is the successor to the Combat Rations R&D program. SUBNET’s community of practice will research and promote manufacturing improvements in the subsistence supply chain with the goals of maximizing capability and capacity to produce, and to encourage innovation and modernization needed to leverage the latest technologies. The desired outcomes of the current short-term projects Microwave Assisted Thermal Sterilization (MATS), MRE Alternate Chemical Laminates, Optimize Combat Ration Inspection Costs, and Combat Rations Shelf Life Temperature Monitoring Project include testing of low risk, high-impact technology and process improvements that will improve the quality of individual and group combat rations, reduce cost, and provide efficiencies, then transitioning these improvements to industrial base suppliers and government suppliers.

The Castings consortium objective is to develop new materials and technologies for the metalcasting industry to help DLA improve the supply of parts that contain castings. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA’s backorders or unfilled orders (UFOs).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 17 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>
<p>Cast parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are castings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the foundry industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the metalcasting supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.</p> <p>The Forgings consortium objective is to develop new materials and technologies for the forging industry to help DLA improve the supply of parts that contain forgings. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the forging supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems.</p> <p>The Additive Manufacturing (AM) objective is to establish AM as an effective alternative to conventional manufacturing and document the process for AM benefits. DLA needs to exploit AM technology as a lead-time and inventory reduction enabler.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>				Project (Number/Name) 18 / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
18: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	10.188	8.590	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.778
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The High Quality Sources SFA are projects undertaken to assure that the industrial base can respond to DLA requirements and DLA can fill military customers' material requirements reliably and consistently. Benefits include eliminating cancelled requisitions returned to customers as "non-procurable." This strategic focus area includes within its scope the former Material Acquisition Electronics program.

The Material Acquisition Electronics roadmap has four major thrusts in Digital Microcircuits: Advanced Schottky TTL, TTL Compatible CMOS, 512 Kilobit RAM/ROM and Mega Gate ASIC. The Roadmap also includes a new major thrust area: Linear Microcircuits. Over the past several years, obsolescence in this class of microcircuits has greatly increased and has become a significant concern. These are classes of microcircuits that are expected to become non-procurable in FY 17 and beyond. Without the technologies planned on the MAE Roadmap, DLA will not be able to support DoD's requirements for high quality spare parts for critical electronic systems and subsystems.

The Strategic Materials roadmap is a new thrust for the DLA Mantech program. It is designed to ensure that critical strategic materials are available from domestic sources and that process innovations are in place to efficiently process or recover strategic materials. Domestic capabilities can enhance national security and potentially reduce Defense Stockpile requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>					Project (Number/Name) 19 / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
19: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	6.362	2.594	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.956
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Improving Technical and Logistics Information Strategic Focus Area (SFA) projects improve and facilitate the communication of technical and logistics information among industry, DLA’s military customers and DLA. This SFA includes Military Unique Sustainment Technology (MUST) and the Defense Logistics Information Research (DLIR) (P.E. 0603712S) within its scope. The movement of the DLIR related work from P.E. 0603712S to the DOD ManTech Program aligns the funding to the critical interface between DLA and industry and away from internal DLA operations.

The MUST focus addresses GAO Report 12-707 recommendations that DOD to establish a “knowledge-based approach” to collaborate on define and communicate of military unique requirements. DLA has the responsibility to communicate and manage the technical requirements among the Services and the Defense Industrial Base. Currently there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop and adopt technologies that can significantly reduce the lead-time between Individual Item and Equipment (IIE) development and sustainment from years to months. The Program focuses on technologies that will transform the military IIE supply chain from an “electronic paper” (i.e. PDF/MS Word) based, manual environment into a knowledge based automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end to end supply chain.

The DLIR Model Based Enterprise effort will develop capabilities to systematically accept engineering and design data from the Military Services, validate and store item technical data in 3D models. There are two classes of data that must be addressed: newly designed parts for systems still in development and legacy parts for systems that are in sustainment. The problem with newly designed parts is capturing the complete and accurate designs. The legacy parts do not have digital engineering models which recreating the design in contemporary engineering systems.

The Technical and Logistical Data Interoperability will pioneer methods to capture data from military Services, Original Equipment Manufacturers (OEMs), and suppliers to form a seamless thread of interoperable and linked data models.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	18.291	1.690	1.770	1.770	-	1.770	1.770	1.785	1.821	1.856	Continuing	Continuing
1: <i>Logistics Support Activities (LSA)</i>	12.488	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.488
03: <i>Pacific Disaster Center</i>	5.803	1.690	1.770	1.770	-	1.770	1.770	1.785	1.821	1.856	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA). The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC develops new and innovative technologies to operate an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	1.754	1.770	1.770	-	1.770
Current President's Budget	1.690	1.770	1.770	-	1.770
Total Adjustments	-0.064	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.064	-			

Change Summary Explanation

FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.064M.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Centers				Project (Number/Name) 1 / Logistics Support Activities (LSA)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
1: Logistics Support Activities (LSA)	12.488	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.488
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress. The staff cognizance and oversight will transfer from the DLA to the Defense Information Systems Agency (DISA) effective October 1, 2014. The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>				Project (Number/Name) 03 / <i>Pacific Disaster Center</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
03: <i>Pacific Disaster Center</i>	5.803	1.690	1.770	1.770	-	1.770	1.770	1.785	1.821	1.856	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the OUSD(AT&L) and the DLA. The PDC is a world-recognized authority and leader in science and information technology applications relating to Humanitarian Assistance and Disaster Relief (HA/DR). It has developed innovative technologies, and has provided operational support for an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department since 2007. The system, covering global hazard is frequently used by COCOMS, particularly PACOM and SOUTHCOM, for HA/DR missions and exercises, and was recently selected as one of the most effective systems in a position paper by the department, reviewing all unclassified information sharing systems. "Expanded use of RAPIDS across the DoD at the Combatant Commands, Joint Task Force, and by deployed units from the services" was identified as "a primary Joint Staff objective" in a memorandum dated July 6, 2017.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Pacific Disaster Center (PDC)	1.690	1.770	1.770
<p>Description: This program is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress. The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. USD(AT&L) will provide acquisition oversight authority for the program.</p> <p>The PDC has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. The Pacific Disaster Center (PDC) function, manpower, and budget resources transferred to the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA) in October 2011.</p> <p>The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC's applications and information products enhance preparedness, situational awareness, and civil-military communications for humanitarian missions worldwide, while its national-level socio-economic Risk and Vulnerability Assessments help inform strategies by measuring indicators for national resiliency using scientific methods.</p> <p>The PDC Program Office's (USD(P), ASD(HD&GS), and DASD(DC&MA)) primary responsibility is for management and stewardship of governmental funds provided in Defense Department appropriations for DoD missions associated with DoD CrM, HA/DR, Theater Security Cooperation, and Defense Support to Civil Authorities (DSCA). In doing this, the Program Office</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>	Project (Number/Name) 03 / <i>Pacific Disaster Center</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>develops and provides policy, oversight and guidance, and jointly develops strategic guidelines, programmatic content and priorities with the UH and PDC. The PDC Program Office also serves as a support element of the Hawaii-based organization especially in the area of gaining Federal agency support and resources, as well as business opportunities.</p> <p>FY 2018 Plans: Risk and Vulnerability Assessment • Explore trend analysis based on existing Global RVA data accumulated of the prior years • Improve analytical reporting/visualization and automated assessment capabilities using Global RVA data • Incorporate country-report analytical capabilities into the above assessment reporting capabilities</p> <p>Data • Explore feasibility of hosting classified data in RAPIDS, should the application be hosted on SIPR • Continue development of data sources for hazards and related observational data TBD</p> <p>Modeling • Integrate alerting capabilities and hazard impact modeling • Continue enhancing application of hazard models to estimate initial needs for HA/DR support missions</p> <p>Application • Improve performance of the system and enhance user experience • Improve mobile device-related features (e.g. battery usage, etc.) • Continue evaluating new and innovative technologies for enhancing user experience (for RAPIDS)</p> <p>FY 2019 Plans: Risk and Vulnerability Assessment • Collaborate with regional Combatant Commands (e.g., SOUTHCOM, PACOM, etc.) to integrate and visualize subnational RVA data into RAPIDS • Improve sub-national analytical reporting/visualization and automated assessment capabilities</p> <p>Data • Explore new technologies for handling “big data” • Improve analytical capabilities using “big data”, including use of social media for early detection of man-made hazards • Continue development of data sources for hazards and related observational data TBD</p> <p>Modeling</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>	Project (Number/Name) 03 / <i>Pacific Disaster Center</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> • Integrate Global Exposure Model for high-resolution “impact and exposure” analytical reporting • Continue enhancing application of hazard models to estimate initial needs for HA/DR support missions <p>Application</p> <ul style="list-style-type: none"> • Expand use and visualization of “big data”, supporting higher-resolution baseline inventories • Improve cross-device user experience (e.g., desktop, mobile tablets, smart phones, wearables, etc.) • Integrate mass (alert) notification functions • Continue evaluating new and innovative technologies for enhancing user experience (for RAPIDS) <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> No significant change.</p>			
Accomplishments/Planned Programs Subtotals	1.690	1.770	1.770

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

PDC projects beyond the baseline Situational Awareness & Decision Support Applications/Tools architecture (Atlas/EMOPS/RAPIDS) undertaken in support of the DoD Cooperative Agreement (CA) with the University of Hawaii (UH) are from PDC customers (e.g., DoD, NGOs, other nations, academia, and industry). The PDC prepares the public, disaster managers, governments, and others to mitigate the effects of disasters. The goal is to have people and technology work together to preserve life, safeguard livelihoods, protect property to foster disaster-resilient communicates. Projects obtained and funded from this customer base serve as a means to determine PDC product and services relevancy.

E. Performance Metrics

Projects objectives and tasks are designed to build upon the previous year’s successes and are consistent with the framework and direction provided by the Strategies 2016-2020 document (updated Nov 2016). At the beginning of each calendar year, an Annual Plan is in-place to guide the program and enable a framework for performance feedback to the DoD PDC Program Manager, the PDC Executive Director, WHS CA Contracting Office, and the UH. At the end of each calendar year, these stakeholders meet to review the past year performance and finalize a new Annual Plan for the next calendar year. This plan details a set of specific objectives to further capabilities and capacities supporting the PDC’s mission and increasing operational value to the stakeholders.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Centers	Project (Number/Name) 03 / Pacific Disaster Center
--	--	--

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PDC Disaster AWARE: Early Warning and Decision Support Applications	MIPR	University of Hawaii Systems : Honolulu, HI	5.803	1.690	Dec 2016	1.770	Mar 2018	1.770	Mar 2019	0.000		1.770	Continuing	Continuing	-
Subtotal			5.803	1.690		1.770		1.770		0.000		1.770	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			5.803	1.690		1.770		1.770		0.000		1.770	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>	Project (Number/Name) 03 / <i>Pacific Disaster Center</i>
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	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>PDC</i>	
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<i>PDC</i>	
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>PDC</i>	
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<i>PDC</i>	
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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	2.075	2.924	1.805	-	1.805	3.679	3.500	3.104	3.162	Continuing	Continuing
ABC: DPAS	0.000	2.075	2.924	1.805	-	1.805	3.679	3.500	3.104	3.162	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Property Accountability System (DPAS) provides the Department an accountability system which is fully compliant with financial reporting regulations and has a clean audit history. With an integrated accountability, utilization, maintenance, and warehouse capability, it is able to provide the Department an enterprise solution for asset management.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	2.154	2.924	2.972	-	2.972
Current President's Budget	2.075	2.924	1.805	-	1.805
Total Adjustments	-0.079	0.000	-1.167	-	-1.167
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.079	-			
• Inflation Adjustment	-	-	-0.025	-	-0.025
• Program Rephase	-	-	-1.142	-	-1.142

Change Summary Explanation

FY2017, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.079M.

Inflation adjustments for Non-Pay/Non-Fuel Pay purchases and Civilian Pay decreased the program baseline in FY2019. The FY2019 funding request was reduced by \$-1.142 million to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708047S / <i>Defense Property Accountability System (DPAS)</i>	Project (Number/Name) ABC / DPAS
--	--	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
ABC: DPAS	0.000	2.075	2.924	1.805	-	1.805	3.679	3.500	3.104	3.162	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DPAS system provides accountability and management functionality to the Department. The budgeted projects will provide enhancements to the existing capability, ensure efficient operability, and provide solutions for process gaps as they are discovered. The greater enhancements to DPAS allow the DoD to sunset legacy systems; DPAS assimilates the legacy functionality into the overall operations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Release DPAS v 4	2.075	2.924	1.805
Description: Provide enhancements to the warehouse management functions; incorporate vehicle telematics; improve the data warehousing for transaction history.			
FY 2018 Plans: Provide functionality for event/project planning to include personnel and equipment resources; enhance interface with DAI to expect expense transactions for CIP Projects; provide interfaces to the Air Force logistics systems.			
FY 2019 Plans: DPAS has experienced exponential growth in the areas of IT asset management and Work Order/Ticket Management. The current Work Order/Ticket tracking capability in DPAS is rather generic and causes inefficiencies for both Vehicle Managers and IT Managers. DPAS will create a Work Order process that is more streamlined and targeted to these asset types. This will be done in one of two methods, depending on which solution will result in less maintenance cost in future years. The first method would be a process that changes the fields displayed and data values in drop down lists depending on the asset type. The second method would be to develop separate processes for the asset types. DPAS will conduct user meetings in FY18 to determine the full scope of the requirements and develop the capabilities in FY19.			
DPAS will continue to provide support for the Financial Audit. The Department will have completed the first full audit and have findings that must be addressed. DPAS will work with each Service or Agency to determine the areas that DPAS can increase capability to permit the findings to be closed. At this time it is difficult to specifically state what these capabilities may be but DPAS is used by all components of the Department so there are sure to be areas that DPAS can implement capabilities to permit the Components to address the findings			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Logistics Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708047S / <i>Defense Property Accountability System (DPAS)</i>	Project (Number/Name) ABC / DPAS

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
The FY 2019 funding request was reduced by \$-1.142 million to account for the availability of prior year execution balances.			
Accomplishments/Planned Programs Subtotals	2.075	2.924	1.805

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

DPAS will ensure the obligations and expenditures are in line with OSD (Comptroller) guidance, as currently issued.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Logistics Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)	Project (Number/Name) ABC / DPAS
--	--	--

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DPAS Version 4 Development	C/CPIF	Contractor TBD : TBD	0.000	2.075	Mar 2017	2.924	Jun 2018	1.805	Jun 2019	0.000		1.805	Continuing	Continuing	-
Subtotal			0.000	2.075		2.924		1.805		0.000		1.805	Continuing	Continuing	N/A
Project Cost Totals			0.000	2.075		2.924		1.805		0.000		1.805	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Logistics Agency																Date: February 2018			
Appropriation/Budget Activity 0400 / 7								R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)								Project (Number/Name) ABC / DPAS			

Fiscal Year	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Research									█	█	█		█	█			█	█		
Design										█	█			█	█			█	█	
Development											█	█			█	█			█	█
Testing												█			█	█			█	█
Implementation												█	█						█	█

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Defense Security Cooperation Agency

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018	FY 2018	FY 2018	FY 2018
		PB Request with CR Adj Base	Total PB Requests* with CR Adj Base	PB Request with CR Adj OCO	Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	9,572	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation	FY 2018		FY 2018		FY 2018	
	FY 2018 Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW				16,619		16,619
Total Research, Development, Test & Evaluation				16,619		16,619

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

09 Feb 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Management Support	349				
Operational System Development	9,223	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	9,572	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
Management Support					
Operational System Development			16,619		16,619
Total Research, Development, Test & Evaluation			16,619		16,619
<u>Summary Recap of FYDP Programs</u>					
Research and Development			16,619		16,619
Total Research, Development, Test & Evaluation			16,619		16,619

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support			
Operational System Development	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028
Summary Recap of FYDP Programs			
Research and Development	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028

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Defense-Wide
FY 2019 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

09 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					

Management Support	349				
Operational System Development	9,223	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		
Summary Recap of FYDP Programs					

Research and Development	9,572	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		

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Defense-Wide
 FY 2019 President's Budget
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 (Dollars in Thousands)

09 Feb 2018

	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
Management Support					
Operational System Development			16,619		16,619
Total Research, Development, Test & Evaluation			16,619		16,619
<u>Summary Recap of FYDP Programs</u>					
Research and Development			16,619		16,619
Total Research, Development, Test & Evaluation			16,619		16,619

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 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support			
Operational System Development	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028
Summary Recap of FYDP Programs			
Research and Development	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028

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Defense-Wide
 FY 2019 President's Budget
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 (Dollars in Thousands)

09 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Defense Security Cooperative Agency	9,572	16,619	16,619		
Total Research, Development, Test & Evaluation	9,572	16,619	16,619		

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation	FY 2018		FY 2018		FY 2018	
	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Defense Security Cooperative Agency				16,619		16,619
Total Research, Development, Test & Evaluation				16,619		16,619

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FY 2019 President's Budget
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Total Obligational Authority
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Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Defense Security Cooperative Agency	8,028		8,028
Total Research, Development, Test & Evaluation	8,028		8,028

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 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
158	0605502T	Small Business Innovative Research	06	349					U
		Management Support		349					
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,374	1,871	1,871			U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	277	298	298			U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,572	14,450	14,450			U
		Operational System Development		9,223	16,619	16,619			
Total Research, Development, Test & Eval, DW				9,572	16,619	16,619			

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2018		FY 2018	FY 2018	FY 2018	S
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	
158	0605502T	Small Business Innovative Research	06						U
		Management Support							
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07				1,871	1,871	U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07				298	298	U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07				14,450	14,450	U
		Operational System Development					16,619	16,619	
Total Research, Development, Test & Eval, DW							16,619	16,619	

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
158	0605502T	Small Business Innovative Research	06				U
		Management Support					
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,855		1,855	U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	304		304	U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	5,869		5,869	U
		Operational System Development		8,028		8,028	
Total Research, Development, Test & Eval, DW				8,028		8,028	

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Defense Security Cooperative Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
158	0605502T	Small Business Innovative Research	06	349					U
		Management Support		349					
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,374	1,871	1,871			U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	277	298	298			U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,572	14,450	14,450			U
		Operational System Development		9,223	16,619	16,619			
Total Defense Security Cooperative Agency				9,572	16,619	16,619			

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Defense Security Cooperative Agency
 FY 2019 President's Budget
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 (Dollars in Thousands)

09 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	S
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	
158	0605502T	Small Business Innovative Research	06						U
Management Support									
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07				1,871		1,871 U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07				298		298 U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07				14,450		14,450 U
Operational System Development									
							16,619		16,619
Total Defense Security Cooperative Agency							16,619		16,619

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Defense Security Cooperative Agency
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

09 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Source
158	0605502T	Small Business Innovative Research	06				U
		Management Support					
190	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,855		1,855	U
191	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	304		304	U
194	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	5,869		5,869	U
		Operational System Development		8,028		8,028	
Total Defense Security Cooperative Agency				8,028		8,028	

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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Defense Security Cooperation Agency • Budget Estimates FY 2019 • RDT&E Program

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605502T / <i>Small Business Innovative Research (SBIR)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.772	0.349	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
002005: <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>	0.772	0.349	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

To support the OSD Small Business Innovation Research (SBIR) and Small Technology Transfer (STTR) Program

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.349	0.000	0.000	-	0.000
Total Adjustments	0.349	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.349	-			

Change Summary Explanation

Not applicable

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502T / <i>Small Business Innovative Research (SBIR)</i>	Project (Number/Name) 002005 / <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
002005: <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>	0.772	0.349	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

To support the OSD Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Small Business Innovate Research	0.349	-	-
Description: To support the establishment of an OSD Component Commercialization Readiness			
Accomplishments/Planned Programs Subtotals	0.349	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Not applicable

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	14.161	1.374	1.871	1.855	-	1.855	2.109	2.033	1.827	1.864	Continuing	Continuing
000204: <i>Partner Outreach and Collaboration Support</i>	14.161	1.374	1.871	1.855	-	1.855	2.109	2.033	1.827	1.864	Continuing	Continuing

A. Mission Description and Budget Item Justification

Partner Outreach and Collaboration Support (POCS) is an Office of the Secretary of Defense (OSD) initiative. The goal of the program is to provide a common information technology platform (GlobalNET) to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of Department of Defense (DoD) institutions and Partners to directly share participants and content across proprietary community websites - fostering networks of partner influencers and enabling better use of DoD resources through collaboration among the Regional Centers for Security Studies, Partnership for Peace (PfP) and international partners, and other DoD educational institutions and communities. GlobalNET currently supports over 80,000 users. The program uses spiral methodology to speed the delivery of open source collaboration technologies the user community. The Defense Security Cooperation Agency (DSCA) oversees execution of the research and development of the GlobalNET effort and its operations, and ensures that the program addresses DoD security cooperation requirements in the context of defense, interagency, and international information sharing and collaboration needs.

The GlobalNET effort focuses on improving collaboration, supporting outreach efforts, and enabling communication among the Regional Centers for Security Studies, the Combatant Commanders (COCOMs), the DSCA, Office of the Under Secretary of Defense for Policy (OUSD(P)), North Atlantic Treaty Organization’s (NATO) Military Partnerships Directorate (MPD), the PfP Consortium of Defense Academies, PfP Partner countries, and other DoD institutions and communities. It provides DoD and international partner security practitioners an unclassified secure platform to share information, communicate and collaborate globally 24/7, and supports administrative activities. It provides the ability to form collaborative communities of interest around security issues. GlobalNET facilitates information sharing and knowledge management concepts in accordance with U.S. policy. POCS implements the Congressional endorsement for the modernization of Defense capabilities in eligible PfP countries relative to their telecommunications infrastructure, and provides allies and partner countries the ability to team in critical cooperative activities that underpin the spirit of the PfP program. The program supports PfP coalition Initiatives through the development of distributive collaboration tools to assist U.S./NATO-approved PfP cooperative activities. This support is important to achieve the interoperability/integration outlined in the Guidance for the Employment of the Force. POCS additionally supports internet-based education, collaboration, exercise simulations, and training center requirements.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	1.374	1.871	1.855	-	1.855
Current President's Budget	1.374	1.871	1.855	-	1.855
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

No change explanation required.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>				Project (Number/Name) 000204 / <i>Partner Outreach and Collaboration Support</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000204: <i>Partner Outreach and Collaboration Support</i>	14.161	1.374	1.871	1.855	-	1.855	2.109	2.033	1.827	1.864	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

POCS is an OSD initiative. The goal of the program is to provide a common information technology platform GlobalNET to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of DoD institutions and Partners to directly share participants and content across proprietary community websites - fostering networks of partner influencers and enabling better use of DoD resources through collaboration among the Regional Centers for Security Studies, PfP and international partners, other DoD educational institutions and communities. GlobalNET currently support over 80,000 users. The program uses spiral methodology to speed the delivery of open source collaboration technologies the user community. The DSCA oversees execution of the research and development of the GlobalNET effort and its operations, and ensures that the program addresses DoD security cooperation requirements in the context of defense, interagency, and international information sharing and collaboration needs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Partner Outreach and Collaboration Support (POCS)	1.374	1.871	1.855
FY 2018 Plans: Continue to update the GlobalNET implementation to the newest platform stable release - allowing greater functionality and better security across all members of the platform. Recertify the security accreditation process which also reflects the new and updated software capabilities as well newly integrated educational organizations. Conduct the research and define the requirements for a gaming and exercise simulation module.			
FY 2019 Plans: Continue updates to the GlobalNET platform: functionality, security, e-Learning, and design. Update and expand capabilities of the Ilias learning management system. Develop the gaming and simulation module.			
FY 2018 to FY 2019 Increase/Decrease Statement: A decrease of -\$16,000 from FY2018 to FY2019 is a result of the POCS program reduction in the GlobalNET effort. Additional support to the War Colleges will also help create further reductions in NDU and other OSD organizations .			
Accomplishments/Planned Programs Subtotals	1.374	1.871	1.855

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>	Project (Number/Name) 000204 / <i>Partner Outreach and Collaboration Support</i>

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The GlobalNET effort employs a spiral acquisition strategy ensuring a well-defined model for each institution/community that can be exported globally. The program uses an organizational approach to ensure sustainable, and updated technology and information sharing procedures. By partnering with other U.S. Government activities, existing assets are leveraged to preserve U.S. investments, avoid duplication of effort between activities, and offer economically prudent solutions to improve information sharing and achieve U.S. security cooperation goals. Independent Operational Test teams are brought on to ensure that GlobalNET bears independent validation of the development team's effort.

E. Performance Metrics

POCS development performance is measured in several methods: the successful meeting of stated performance objectives in the statement of work, and meeting target dates in the project management plan; via a combination of statistics including the number of trouble tickets generated on the development site, operational user feedback on development site usability, and design; and the system's performance during developmental and operational testing. The use of a 3rd party to execute the operational test ensures that the system meets the performance metrics prior to moving to production.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605127T / Partner Outreach and Collaboration Support (POCS)	Project (Number/Name) 000204 / Partner Outreach and Collaboration Support
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Defense Security Cooperation Agency	MIPR	Civic Actions : Berkeley, CA	14.161	1.374	Jul 2017	1.871	Jul 2018	1.855	Jul 2019	-		1.855	Continuing	Continuing	-
Subtotal			14.161	1.374		1.871		1.855		-		1.855	Continuing	Continuing	N/A
Project Cost Totals			14.161	1.374		1.871		1.855		-		1.855	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>	Project (Number/Name) 000204 / <i>Partner Outreach and Collaboration Support</i>

FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>GlobelNet Update</i>	
Upgrade Core and Maintenance Releases	
Deploy to Other Institutions	

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>GlobelNet Update</i>	
Upgrade Core and Maintenance Releases	
Deploy to Other Institutions	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support (POCS)</i>	Project (Number/Name) 000204 / <i>Partner Outreach and Collaboration Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>GlobelNet Update</i>				
Upgrade Core and Maintenance Releases	1	2016	4	2023
Deploy to Other Institutions	3	2014	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0605147T / <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	1.710	0.277	0.298	0.304	-	0.304	0.303	0.309	0.312	0.318	Continuing	Continuing
000204: <i>Overseas Humanitarian Assistance Shared Information System</i>	1.710	0.277	0.298	0.304	-	0.304	0.303	0.309	0.312	0.318	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Overseas Humanitarian Assistance Shared Information System (OHASIS) provides stakeholders of Department of Defense (DoD) Humanitarian Assistance (HA) programs, including embassy staff, the Combatant Commands (COCOMs), the Defense Security Cooperation Agency (DSCA), and a broad range of DoD and interagency partners, the capability to manage, support, and visualize Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) funded projects on a web-based map display, in addition to automating report generation, providing tools to coordinate with Interagency and partner nation stakeholders, and perform a variety of analyses.

Under the direction of DSCA, the U.S. Army Corps of Engineers, Army Geospatial Center (AGC) is responsible for the entire lifecycle--from system definition to development, support, training, and product improvement of OHASIS. The AGC has been responsible for the OHASIS system since 2005 and has evolved it to the present 2.5 system, which contains more than 16,000 active projects (7,000 of which have been completed) valued at more than \$2.3 billion, with a community of over 6,000 users. The OHASIS system is a critical and mission essential means for thousands of military and civilian users to develop, staff, coordinate, approve, fund, implement, manage, and evaluate projects intended to assist the COCOMs in accomplishing theater campaign plan objectives and achieve strategic ends states in support of U.S. national security and foreign policy interests.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.277	0.298	0.304	-	0.304
Current President's Budget	0.277	0.298	0.304	-	0.304
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

No change explanation required

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)				Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000204: Overseas Humanitarian Assistance Shared Information System	1.710	0.277	0.298	0.304	-	0.304	0.303	0.309	0.312	0.318	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Overseas Humanitarian Assistance Shared Information System (OHASIS) provides stakeholders of Department of Defense (DoD) Humanitarian Assistance (HA) programs, including embassy staff, the Combatant Commands (COCOMs), the Defense Security Cooperation Agency (DSCA), and a broad range of DoD and interagency partners, the capability to manage, support, and visualize Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) funded projects on a web-based map display, in addition to automating report generation, providing tools to coordinate with Interagency and partner nation stakeholders, and perform a variety of analyses.

Under the direction of DSCA, the U.S. Army Corps of Engineers, Army Geospatial Center (AGC) is responsible for the entire lifecycle--from system definition to development, support, training, and product improvement of OHASIS. The AGC has been responsible for the OHASIS system since 2005 and has evolved it to the present 2.5 system, which contains more than 16,000 active projects (7,000 of which have been completed) valued at more than \$2.3 billion, with a community of over 6,000 users. The OHASIS system is a critical and mission essential means for thousands of military and civilian users to develop, staff, coordinate, approve, fund, implement, manage, and evaluate projects intended to assist the COCOMs in accomplishing theater campaign plan objectives and achieve strategic ends states in support of U.S. national security and foreign policy interests.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Overseas Humanitarian Assistance Shared Information System	0.277	0.298	0.304
FY 2018 Plans: Develop and launch low-bandwidth version of OHASIS that provides basic program tools (view only, task response, reports, minimal editing)			
Improve usability of project nomination and explore software optimization techniques to reduce load times and improve user experience			
Develop software infrastructure for CAC-enabled capability (full OHASIS or limited capability) contingent on evolving access requirements			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)	Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Continue to find more efficient ways of integrating with other systems including Pacific Disaster Center, Reachback Engineering Data Integration (REDi), Cooperation Security JCTD, Global Theater Security Cooperation Management Information System (G-TSCMIS), United States Agency for International Development (USAID), CAOS, Foreign Assistance Dashboard, Marine Civil Information Management System (MARCIMS), etc.</p> <p>FY 2019 Plans: Manage the configuration control, generate change request documentation for all new features, acquire appropriate signature and maintain the System Version Description document for the OHASIS system. Develop full functional and standardized regression testing to guide validation of new software releases in coordination with Security Technical Implementation Guides (STIGs) or Security Requirement Guides (SRGs), which will re-assess the compliance and provide updated assessment results for the OHASIS application and database. Assess the OHASIS application, Intelligence Information System (IIS) and database compliance with any applicable execute order (EXORD), operation order (OPORD), or task order (TASKORD) published by: DSCA, US Cyber Command (CYBERCOM), Headquarters Department of the Army (HQDA), CIO/G-6, ARCYBER/2A, 2RCC, US Army Network Enterprise Technology Command (NETCOM), 7th Signal Command (T), 93rd Signal Brigade and Regional Network Enterprise Center - National Capital Region (RNEC-NCR); as well as implement any required configuration changes or provide reports or mitigations for OHASIS. Run regular Security Content Automation Protocol (SCAP) scans prior and after all software releases and resolve all findings rated "Critical" or "high" immediately for the OHASIS application, IIS and database.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase of \$6,000 from FY2018 to FY2019 is due to a price growth within the program.</p>			
Accomplishments/Planned Programs Subtotals	0.277	0.298	0.304

C. Other Program Funding Summary (\$ in Millions) N/A
Remarks N/A

D. Acquisition Strategy
The program employs an incremental technology development and implementation strategy to ensure a desired capability is delivered in a relevant timeframe. This strategy also will continue to leverage industry standard technologies for web development, database technology, database modeling, geographic information systems, reporting, and documentation. As additional users require the system, it will continue to be developed with scalability and maintainability as key considerations. Additionally, this capability will help DoD better collaborate and support external agencies and their programs by leveraging the web services that have been designed in the initial baseline.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605147T / <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>	Project (Number/Name) 000204 / <i>Overseas Humanitarian Assistance Shared Information System</i>

E. Performance Metrics

OHASIS project performance is measured in several methods: the successful meeting of stated performance objectives in the statement of work and meeting target dates in the project management plan, and successful management of the full life cycle of the over 1,000 Overseas Humanitarian Disaster and Civic Aid (OHDACA) projects per Fiscal Year.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)	Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Geospatial Research Integration Development and Support (GRIDS)	MIPR	SAIC : Alexandria, VA	1.710	0.277	Mar 2017	0.298	Mar 2018	0.304	Mar 2019	-		0.304	Continuing	Continuing	Continuing
Subtotal			1.710	0.277		0.298		0.304		-		0.304	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.710	0.277		0.298		0.304		-		0.304	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)	Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

System Development and Compliance	
Infrastructure for CAC-enabled Capability	
Update System and Database Compliance	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605147T / <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>	Project (Number/Name) 000204 / <i>Overseas Humanitarian Assistance Shared Information System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>System Development and Compliance</i>				
Infrastructure for CAC-enabled Capability	4	2018	3	2021
Update System and Database Compliance	1	2019	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	30.983	7.572	14.450	5.869	-	5.869	0.000	0.000	0.000	0.000	Continuing	Continuing
000205: <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	30.983	7.572	14.450	5.869	-	5.869	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Global Theater Security Cooperation Management Information System (G-TSCMIS) Program is an Office of the Secretary of Defense (OSD) initiative to develop and deploy a common web-based, centrally hosted Management Information System (MIS) that will serve as the information focus point for the Nation's Security Cooperation (SC) efforts by providing decision makers, SC planners and other users with the ability to view, manage, assess, and report SC activities and events. G-TSCMIS will consolidate, improve upon, and replace legacy TSCMIS solutions hosted at over 20 Department of Defense (DoD) Services, Agencies, and Combatant Commands (CCDRs). It will provide a comprehensive picture of whole-of-government SC activities, and will contribute to planning more effective cooperative security activities to align or meet desired outcomes in support of SC end states. The program is an evolutionary rapid Information Technology (IT) acquisition pilot program, as described in FY 2010 National Defense Authorization Act (NDAA) Section 804, that provides users at every user command with greater capability through several iterations and releases that are developed and implemented over time. The Department of Navy (DoN) was assigned acquisition lead for the effort by Deputy Secretary of Defense (DEPSECDEF).

G-TSCMIS is a fully interoperable component of Adaptive Planning and Execution (APEX) and the DoD Joint C2 (JC2) Capability. The effort will support the strategic planning of CCDRs by providing access to reports of programs, activities, events, funding, assessments, and status of achieving defined end states. G-TSCMIS will provide visualization, assessment, reporting, and data management throughout the conduct of SC activities planning and execution phases. Information from the SC activities will be binned by separate SC programs, budget lines/funding streams, equipment drawdown, etc. This will enable users at the tactical level to focus on specific programs, participating forces, events, and activities, while users at the strategic level will be able to access summary reports of geographic regions, resource requirements, or total expenditure of funds by source. G-TSCMIS support to DoD's SC reporting requirements is mandated by federal law for many SC programs and activities. To adhere to U.S. regulations, G-TSCMIS reports will be tailored to include programs, events, and activities by category, geographical areas, assessments, U.S. staffing levels, and sources of funding.

G-TSCMIS will interface with other systems, such as Joint Training Information Management System (JTIMS), Overseas Humanitarian Assistance Shared Info System (OHASIS), and Global Force Management - Data Initiative (GFM-DI). G-TSCMIS must also be interoperable with the other United States Government (USG) foreign assistance and international cooperation information systems. G-TSCMIS will allow decision makers and analysts to identify redundant investments, plan more effective engagements, and find gaps and opportunities for building more capable partners. The program uses multiple, rapidly executed releases of capability beginning with a Milestone B equivalent initial build decision held in Quarter 1 FY 2012, which resulted in approval from the Milestone Decision Authority (MDA) to enter the Incremental and Iterative Development and Deployment (IIDD) phase. The initial releases require defined objectives and mature technology. Based on analysis of

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>
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required capabilities and resources, the Program Office is planning on executing G-TSCMIS in four major releases, each with three iterations, across the period of FY2012-FY2020.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	7.572	14.450	13.350	-	13.350
Current President's Budget	7.572	14.450	5.869	-	5.869
Total Adjustments	0.000	0.000	-7.481	-	-7.481
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Reprogrammings	-	-	-6.922	-	-6.922
• Underexecution Reduction	-	-	-0.559	-	-0.559

Change Summary Explanation

The decrease of -\$6,922,000 in FY2019 is due to the completion of software development for the final version of G-TSCMIS (Release 4) as well as Full Operational Capability by the end of Q1 in FY2019. Additionally, the FY 2019 funding request was reduced by \$559,000 to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>				Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000205: <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	30.983	7.572	14.450	5.869	-	5.869	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Theater Security Cooperation Management information System (G-TSCMIS) Program is an Office of the Secretary of Defense (OSD) initiative to develop and deploy a common web-based, centrally hosted Management Information System (MIS) that will serve as the information focus point for the Nation's Security Cooperation (SC) efforts by providing decision makers, SC planners and other users with the ability to view, manage, assess, and report SC activities and events. G-TSCMIS will consolidate, improve upon, and replace legacy TSCMIS solutions hosted at over 20 Department of Defense (DoD) Services, Agencies, and Combatant Commands (CCDRs). It will provide a comprehensive picture of whole-of-government SC activities, and will contribute to planning more effective cooperative security activities to align or meet desired outcomes in support of SC end states. The program is an evolutionary rapid Information Technology (IT) acquisition pilot program, as described in FY 2010 National Defense Authorization Act (NDAA) Section 804, that provides users at every user command with greater capability through several iterations and releases that are developed and implemented over time. The Department of Navy (DoN) was assigned acquisition lead for the effort by Deputy Secretary of Defense (DEPSECDEF).

G-TSCMIS is a fully interoperable component of Adaptive Planning and Execution (APEX) and the DoD Joint C2 (JC2) Capability. The effort will support the strategic planning of CCDRs by providing access to reports of programs, activities, events, funding, assessments, and status of achieving defined end states. G-TSCMIS will provide visualization, assessment, reporting, and data management throughout the conduct of SC activities planning and execution phases. Information from the SC activities will be binned by separate SC programs, budget lines/funding streams, equipment drawdown, etc. This will enable users at the tactical level to focus on specific programs, participating forces, events, and activities, while users at the strategic level will be able to access summary reports of geographic regions, resource requirements, or total expenditure of funds by source. G-TSCMIS support to DoD's SC reporting requirements is mandated by federal law for many SC programs and activities. To adhere to U.S. regulations, G-TSCMIS reports will be tailored to include programs, events, and activities by category, geographical areas, assessments, U.S. staffing levels, and sources of funding.

G-TSCMIS will interface with other systems, such as Joint Training Information Management System (JTIMS), Overseas Humanitarian Assistance Shared Info System (OHASIS), and Global Force Management - Data Initiative (GFM-DI). G-TSCMIS must also be interoperable with the other United States Government (USG) foreign assistance and international cooperation information systems. G-TSCMIS will allow decision makers and analysts to identify redundant investments, plan more effective engagements, and find gaps and opportunities for building more capable partners. The program uses multiple, rapidly executed releases of capability beginning with a Milestone B equivalent initial build decision held in Quarter 1 FY 2012, which resulted in approval from the Milestone Decision Authority (MDA) to enter the Incremental and Iterative Development and Deployment (IIDD) phase. The initial releases require defined objectives and mature technology. Based on analysis of

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

required capabilities and resources, the Program Office is planning on executing G-TSCMIS in four major releases, each with three iterations, across the period of FY2012-FY2020.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Global Theater Security Cooperation Management Information System (G-TSCMIS)</p> <p>FY 2018 Plans: Award the Release 4 contract and conduct post award conference; begin planning efforts and conduct both the preliminary and critical design reviews for government acceptance; conduct Code and Unit Testing, contractor software integration testing (CSIT), software acceptance testing, government Independent Verification and Validation (IV&V) testing, Information Assurance (IA) testing, and Integrated Test. User stories and scenarios will be developed to support testing. Design reviews and planning efforts of new capabilities will be very technical and required full understanding of requirements. New capabilities will include the ability for conducting strategic-level analysis, assessment, and decision making by senior OSD, Chairman of the Joint Chiefs of Staff (CJCS), and Military Department (MILDEP) stakeholders via the Strategic Visualization and Decision Support component; non-DoD Common Access Card (CAC)/ Public Key Infrastructure (PKI) Token Access which will support Inter-agency access from non-DOD agencies such as the Dept. of State; a document repository so all pertinent security cooperation documentation from each user's organization is easily shared and accessible. Further improvements will be accomplished on the Cross-Domain Solution (CDS), which will allow the transfer of data/documents from Secret Internet Protocol Router Network (SIPRNet) to the Non-classified Internet Protocol Router Network (NIPRNet); the addition of four Authoritative Data Sources (ADS) which are a major component of G-TSCMIS data and reduce user re-entry resulting in a positive operational impact and higher quality of data -- i.e. completeness and accuracy; expansion of Attribute-Based Access Control (ABAC), which will facilitate dynamic creation and maintenance of access control policies, subject attributes, and resource attributes.</p> <p>An increase of \$6.589M from FY2017 to FY2018 is due to the required development contract award of the fourth release, Release 4. New requirements resulted from the Joint Staff J6 Requirements Workshop in June 2015, National Defense Authorization Act (NDAA) 17 and NDAA 18 will added additional developmental efforts to future releases. New capabilities will include the ability for assisting OSD Program Objective Memorandum (POM) development, conducting strategic-level analysis, assessment, and decision making by senior OSD Cost Assessment and Performance Evaluation (CAPE), JS, Defense Security Cooperation Agency (DSCA), CJCS, and MILDEP stakeholders via the Strategic Visualization and Decision Support component; non-DoD CAC/ PKI Token Access which will support Inter-agency access from non-DoD agencies such as the Department of State; a document repository so all pertinent security cooperation documentation from each user's organization is easily shared and accessible. Further improvements will be accomplished on the CDS, which will allow the transfer of data/documents from the SIPRNet to the NIPRNet; the addition of four ADS which are a major component of G-TSCMIS data and reduce user re-entry resulting in a positive operational impact and higher quality of data -- i.e. completeness and accuracy; expansion of Attribute-</p>	7.572	14.450	5.869

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

B. Accomplishments/Planned Programs (\$ in Millions)

Based Access Control (ABAC), which will facilitate dynamic creation and maintenance of access control policies, subject attributes, and resource attributes.			
FY 2019 Plans: Complete development and fielding of Release 4 software. Complete Code and Unit Testing, software integration testing (SIT), software acceptance testing, government Independent Verification and Validation (IV&V) testing, and Information Assurance (IA) testing.			
FY 2018 to FY 2019 Increase/Decrease Statement: The decrease of -\$7,950,000 from FY2018 to FY2019 is a result of plans to complete development and implementation of Release 4 through FY2019.			
Accomplishments/Planned Programs Subtotals	7.572	14.450	5.869

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>			<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• 1002200T: <i>Other DoD Programs - G-TSCMIS</i>	0.741	0.741	2.000	-	2.000	4.590	4.682	4.575	4.677	Continuing	Continuing

Remarks

D. Acquisition Strategy

G-TSCMIS will follow the Rapid IT Acquisition approach as detailed in Section 804 of the 2010 NDAA. G-TSCMIS will initiate an evolutionary and iterative development process for a software-only solution using multiple, rapidly executed releases of capability beginning with a Build Decision in FY2012 and enter the IIDD phase. Once fielded and operational on both NIPR and SIPR, users will access G- TSCMIS over a web browser with information on a centralized server. The development period is planned for FY 2012 through FY 2020. G-TSCMIS contracting used fair opportunity competitive procedures on the Indefinite Delivery Indefinite Quantity (IDIQ) MAC for Releases 1 and 2, and fair and open competition for the Release 3 contract. Barriers to competition were minimized by using performance and functional specifications and equivalent commercial standards. Release 4 will be completed by a separate contract which will be competed for under fair and open competition.

E. Performance Metrics

G-TSCMIS performance is measured in several outcome-based methods. The JC2 Capability Definition Package produced by JS J6 defines the Key Performance Parameters (KPP) and Key System Attributes (KSA) to be met. JS J6 also approved specific Measures of Effectiveness and Measures of Performance (MOE/MOP), establishing thresholds and objectives for G-TSCMIS software to meet. Successful meeting of stated performance objectives in the statement of work, and meeting cost, schedule and performance targets as defined in the G-TSCMIS Acquisition Program Baseline are key metrics for the program. The use of participating Service

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

Operational Test Agencies to perform operational testing ensures G-TSCMIS meets the performance metrics prior to making the software operational. Additional statistics-based metrics, trouble tickets logged by the Service Desk, operational user feedback and IV&V and Developmental tests validate system performance. Major Performers: Science Applications International Corporation (SAIC) for Release 1, 2 and 3 software development.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Cooperation Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	MIPR	SSC LAND : Charleston, SC	17.806	1.026	Dec 2016	1.334	Dec 2017	0.621	Dec 2018	-		0.621	Continuing	Continuing	-
Software Development	C/CPIF	Leidos : Reston, VA	9.018	2.218	Dec 2016	-		-		-		-	Continuing	Continuing	-
Systems Engineering	MIPR	MITRE : San Diego, CA	0.371	0.191	Dec 2016	0.210	Dec 2017	0.086	Dec 2018	-		0.086	Continuing	Continuing	-
Training Development	MIPR	SSC PAC : San Diego, CA	0.367	0.119	Dec 2016	0.131	Dec 2017	-		-		-	Continuing	Continuing	-
Software Development	C/CPIF	TBD : TBD	0.000	1.929	Mar 2017	10.477	May 2018	4.449	May 2019	-		4.449	Continuing	Continuing	-
Subtotal			27.562	5.483		12.152		5.156		-		5.156	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	MIPR	Various : Various	0.443	0.404	Dec 2016	0.513	Dec 2017	0.096	Dec 2018	-		0.096	Continuing	Continuing	-
Subtotal			0.443	0.404		0.513		0.096		-		0.096	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Option/CPFF	Seaport : San Diego, CA	2.138	1.203	Dec 2016	1.264	Dec 2017	0.415	Dec 2018	-		0.415	Continuing	Continuing	-
Systems Engineering Management	Option/CPFF	Sentek : San Diego, CA	0.344	-		-		-		-		-	Continuing	Continuing	-
Contract Engineering Support	SS/CPFF	Seaport : San Diego, CA	0.284	0.285	Dec 2016	0.313	Dec 2017	0.113	Dec 2018	-		0.113	Continuing	Continuing	-
Government Engineering Support	MIPR	SSC PAC : San Diego, CA	0.194	0.197	Dec 2016	0.208	Dec 2017	0.089	Dec 2018	-		0.089	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Cooperation Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	MIPR	SPAWAR : San Diego, CA/ Charleston, SC	0.018	-		-		-		-		-	Continuing	Continuing	-
Subtotal			2.978	1.685		1.785		0.617		-		0.617	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	30.983	7.572	14.450	5.869	-	5.869	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																												
G-TSCMIS Rel 4 Build Decision																												
G-TSCMIS Rel 4 FDR																												
Interactive & Incremental Development/ Deployment (IIDD) Activities Release 4																												
Systems Engineering																												
Define/ Design/ Develop Capabilities																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Security Cooperation Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management Information Systems (G-TSCMIS)</i>	Project (Number/Name) 000205 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Acquisition Milestones				
G-TSCMIS Rel 4 Build Decision	2	2018	2	2019
G-TSCMIS Rel 4 FDR	1	2019	1	2020
Interactive & Incremental Development/ Deployment (IIDD) Activities Release 4				
Systems Engineering	2	2018	1	2020
Define/ Design/ Develop Capabilities	2	2018	4	2020

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation -----	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	9,275	10,430	10,430		
Total Research, Development, Test & Evaluation	9,275	10,430	10,430		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation -----	FY 2018		FY 2018	FY 2018		
	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW				10,430		10,430
Total Research, Development, Test & Evaluation				10,430		10,430

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	16,204		16,204
Total Research, Development, Test & Evaluation	16,204		16,204

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
Operational System Development	9,275	10,430	10,430		
Total Research, Development, Test & Evaluation	9,275	10,430	10,430		
Summary Recap of FYDP Programs					
Intelligence and Communications	5,034	5,365	5,365		
Research and Development	4,241	4,565	4,565		
Classified Programs		500	500		
Total Research, Development, Test & Evaluation	9,275	10,430	10,430		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

	FY 2018 Less Enacted Div B Emergency P.L.115-96*** Requests**	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----					
Operational System Development			10,430		10,430
Total Research, Development, Test & Evaluation			10,430		10,430
Summary Recap of FYDP Programs -----					
Intelligence and Communications			5,365		5,365
Research and Development			4,565		4,565
Classified Programs			500		500
Total Research, Development, Test & Evaluation			10,430		10,430

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Operational System Development	16,204		16,204
Total Research, Development, Test & Evaluation	16,204		16,204
 Summary Recap of FYDP Programs -----			
Intelligence and Communications	5,954		5,954
Research and Development	9,750		9,750
Classified Programs	500		500
Total Research, Development, Test & Evaluation	16,204		16,204

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Summary Recap of Budget Activities	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Operational System Development	9,275	10,430	10,430		
Total Research, Development, Test & Evaluation	9,275	10,430	10,430		
Summary Recap of FYDP Programs					
Intelligence and Communications	5,034	5,365	5,365		
Research and Development	4,241	4,565	4,565		
Classified Programs		500	500		
Total Research, Development, Test & Evaluation	9,275	10,430	10,430		

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----					
Operational System Development			10,430		10,430
Total Research, Development, Test & Evaluation			10,430		10,430
Summary Recap of FYDP Programs -----					
Intelligence and Communications			5,365		5,365
Research and Development			4,565		4,565
Classified Programs			500		500
Total Research, Development, Test & Evaluation			10,430		10,430

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Operational System Development	16,204		16,204
Total Research, Development, Test & Evaluation	16,204		16,204
 Summary Recap of FYDP Programs -----			
Intelligence and Communications	5,954		5,954
Research and Development	9,750		9,750
Classified Programs	500		500
Total Research, Development, Test & Evaluation	16,204		16,204

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation -----	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
-----	-----	-----	-----	-----	-----
Defense Security Service	9,275				
Total Research, Development, Test & Evaluation	9,275				

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs

Defense Security Service					
Total Research, Development, Test & Evaluation					

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

30 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Defense Security Service			
Total Research, Development, Test & Evaluation			

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
189	0604130V	Enterprise Security System (ESS)	07	4,241	4,565	4,565			U
233	0305327V	Insider Threat	07	5,034	5,365	5,365			U
9999	9999999999	Classified Programs			500	500			U
		Operational System Development		9,275	10,430	10,430			
Total Research, Development, Test & Eval, DW				9,275	10,430	10,430			

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency		
189	0604130V	Enterprise Security System (ESS)	07				4,565		4,565	U	
233	0305327V	Insider Threat	07				5,365		5,365	U	
9999	9999999999	Classified Programs					500		500	U	
		Operational System Development					10,430		10,430		
Total Research, Development, Test & Eval, DW									10,430		10,430

Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
189	0604130V	Enterprise Security System (ESS)	07	9,750		9,750	U
233	0305327V	Insider Threat	07	5,954		5,954	U
9999	9999999999	Classified Programs		500		500	U
		Operational System Development		16,204		16,204	
Total Research, Development, Test & Eval, DW				16,204		16,204	

Defense Security Service
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
189	0604130V	Enterprise Security System (ESS)	07	4,241	4,565	4,565			U
233	0305327V	Insider Threat	07	5,034	5,365	5,365			U
		Operational System Development		9,275	9,930	9,930			
Total Defense Security Service				9,275	9,930	9,930			

Defense Security Service
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
189	0604130V		Enterprise Security System (ESS)	07				4,565		4,565	U
233	0305327V		Insider Threat	07				5,365		5,365	U
			Operational System Development					9,930		9,930	
Total Defense Security Service								9,930		9,930	

Defense Security Service
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

30 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se-c
189	0604130V	Enterprise Security System (ESS)	07	9,750		9,750	U
233	0305327V	Insider Threat	07	5,954		5,954	U
		Operational System Development		15,704		15,704	
Total Defense Security Service				15,704		15,704	

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Defense Security Service • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
189	07	0604130V	Enterprise Security System (ESS).....	Volume 5 - 545
233	07	0305327V	Insider Threat.....	Volume 5 - 553

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Defense Security Service • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

Program Element Title	Program Element Number	Line #	BA	Page
Enterprise Security System (ESS)	0604130V	189	07.....	Volume 5 - 545
Insider Threat	0305327V	233	07.....	Volume 5 - 553

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	114.394	4.241	4.565	9.750	-	9.750	7.945	7.587	7.542	4.676	Continuing	Continuing
000: <i>Enterprise Security System (ESS)</i>	114.394	4.241	4.565	9.750	-	9.750	7.945	7.587	7.542	4.676	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Security Service (DSS) supports national security and the warfighter through its industrial security oversight, education, and insider threat missions. The DSS is responsible for overseeing the protection of classified information and technologies, and materials in the hands of cleared industry by ensuring compliance with the National Industrial Security Program (NISP) on behalf of 26 Department of Defense (DoD) components and 32 other U.S. Federal agencies. The NISP serves as a single, integrated, cohesive industrial security program to protect classified information and to preserve our Nation's economic and technological interests. The DSS provides security oversight, counterintelligence coverage and support to approximately 10,000 cleared companies (comprising over 12,800 industrial facilities and about 850,000 cleared contractors), and accreditation of more than 55,000 workstations across multiple and differing classified networks that process classified information and 160 Secure Internet Protocol Router Networks (SIPRNet) nodes.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	4.241	4.565	4.183	-	4.183
Current President's Budget	4.241	4.565	9.750	-	9.750
Total Adjustments	0.000	0.000	5.567	-	5.567
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	0.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• One Time Adjustment	0.000	-	5.567	-	5.567

Change Summary Explanation

The FY19 funding can be attributed to the delays in the NISS Incremental 1 development contract award in Q4 FY15 and the new SIPR infrastructure required for the implementation of NISS Increment 2. Increment 2 will require expanded licensing for Oracle OBIEE and licensing required from the company Software AG Government Solutions (SAGGS), which were not originally taken into consideration. The application will also introduce new cost drivers such as Cross Domain Solution (CDS) and expanded MilCloud footprint as DSS moves forward to comply with the DoD mandate of Cloud-First. NISS will be a driver for secondary/ COOP utilization of MilCloud services.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>				Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000: <i>Enterprise Security System (ESS)</i>	114.394	4.241	4.565	9.750	-	9.750	7.945	7.587	7.542	4.676	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Security Service manages the Enterprise Security System (ESS) to provide an effective, real-time, security support capability for the Military Departments, DoD Agencies, the NISP, and other Federal Agencies. In compliance with the Expanded Electronic Government, President’s Management Agenda, and the DoD Enterprise Architecture Framework, ESS is the unified offering of security mission systems which facilitate and automate improved national investigative standards, streamline security processes, and increase DoD community collaboration.

The DSS Mission Information Technology (IT) systems provide critical service to the major DSS mission areas for Industrial Security Oversight and Security Education. DSS performs this critical function through operation of its mission production systems to include the Industrial Security Facilities Database (ISFD), the DSS Gateway, and the Security Training Education and Professionalization Portal (STEPP). RDT&E for DSS mission systems primarily includes pre-planned product improvements to the applications, researching and improving assured information sharing to better posture systems and networks against vulnerabilities, ensuring self-defense of systems and networks, and safeguarding data at all stages for the DSS to increase efficiencies by providing web-based systems to manage certification and accreditation activities. These IT systems are as follows:

Office of Designated Approving Authority (ODAA) Business Management System (OBMS). The OBMS will automate the approval and certification process of cleared industry’s classified information processing security plans and operations. This will increase mission efficiency by providing a web-based system to manage certification and accreditation activities, provide improved reporting capabilities to support DSS and industry through improved metrics, accreditation timeliness and accuracy and reduce the number of unaccredited systems by providing automated notifications to DSS and industry.

EFCL: The eFCL will be a centralized repository for information of facilities participating in the National Industrial Security Program (NISP). The eFCL will capture facility information relating to a cleared facility, from the initial processing of the facility clearance, the record decision pertaining to facility clearance request, to include Foreign Ownership Control or Influence (FOCI) information, as well as decommissioning the facility clearance, and capturing the DSS oversight activities. The eFCL will provide a means for users to submit, update, search, and view facility verification requests.

Industrial Security Facilities Database (ISFD). ISFD is the main DSS mission system that tracks and executes the National Industrial Security Program for DoD and 31 other Federal Executive Agencies of cleared industrial security facilities. The ISFD provide users with a nationwide perspective on National Industrial Security Program related facilities, as well as, facilities under DSS oversight in the DoD conventional AA&E program. ISFD provides source data for the DoD Joint Personnel Adjudicative System (JPAS) and the Facility Verification Request (FVR) application.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>	Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>
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National Industrial Security System (NISS, formerly known as Field Operations System (FOS). The NISS is slated as the next generation enterprise capability, replacing the Industrial Security Facility Database (ISFD). Additionally, NISS will provide seamless integration of other DSS systems and applications, such as eFCL, OBMS, DD-254, and Mobile Workforce Applications. NISS will provide DSS with comprehensive enhanced capability to manage its entire mission portfolio. NISS will improve information sharing and collaboration, providing timely and accurate data in the hands of field representatives for decision-making. The system will provide agency-wide metrics to measure and improve agency performance in providing security oversight and the protection of national security.

The National Contract Classification System (NCCS). The Federal Acquisition Regulation (FAR) requires a DD Form 254 be incorporated in each classified contract, and the National Industrial Security Operating Manual (NISPOM)(4-103a) requires a DD 254 be issued by the government with each Invitation for Bid, Request for Proposal, or Request for Quote. The DD Form 254 provides contractor (or a subcontractor) the security requirements and classification guidance necessary to perform on a classified contract. Contract Security Classification Specification required by DoD 5220.22-4, Industrial Security Regulation and the National Industrial Security Program Operating Manual (NISPOM) is to develop a federated system for the oversight and management of providing classified information access and guidance required to perform on classified contracts. The DD 254, an underlying business processes, is critical to ensure access to our Nation's classified information is properly safeguarded.

National Industrial Security Program (NISP) Control Access and Information Security System (NCAISS) formerly known as Identity Management (IdM). NCAISS is mandatory for compliance with Department of Defense (DoD) Public Key Infrastructure (PKI) Program Management Office and Office of the Assistant Secretary of Defense for Networks and Information Integration (ASD-NII), Joint Task Force for Global Networks Operations (JTF-GNO) Communications Tasking Order (CTO) 06-02, CTO 07-015, and Office of Management and Budget (OMB) Memo 11-11 (M-11-11), directing accelerated use of PKI across the enterprise. This initiative is designed to enable multiple DSS business systems to have service-accessibility that is controlled through PKI-compliant single sign-on authentication. Potential expanded use of the NCAISS across the DSS enterprise to provide CAC-based authentication for business support applications to support the SIPRNet and JWICS domains, provide enhanced identity and access control analytics. It will also incorporate any remaining DSS operated application into the DSS NCAISS solution.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Systems Enhancement</p> <p>Description: FY 2017 Accomplishments: 1. NISS. Completed core development of NISS Initial Operating Capability (IOC) of Increment 1 in 3Q of FY17. Increment 1 includes ISFD and e-FCL core functionality, and will replace both systems once deployed in 4Q FY17. Completed Independent Verification and Validation (IV&V) and Government Acceptance Testing (GAT) of Increment 1 IOC in 4Q of FY17. Began addressing IV&V and GAT findings, to be completed prior to IOC deployment in 4Q FY17. Awarded a Task Order to provide computer-based training to accompany deployment of NISS Increment 1 in 4Q FY17, and began development of the training. Initiated planning of NISS Increment 2. 2. NCCS. FOC milestone achieved Dec 2016 with the release of NCCS v5.9.1. Two releases with enhancements will continue in FY17 to include; enhanced search criteria, the automation of the National Interest Determinations (NID) process, data encryption, additional attachment capabilities, and various other minor enhancements to NCCS.</p>	4.241	4.565	9.750

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>	Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>3. NCAISS. NCAISS integrations will continue in FY17 to include projected integrations with National Industrial Security System (NISS), and the addition of a application status Stoplight Page. An instance of NCAISS will be installed in MilCloud. NCAISS will continue under operations and maintenance throughout FY17.</p> <p>4. ISFD. No future funding required.</p> <p>5. eFCL. Continuation of minor updates to support Field operations and continual system maintenance. A significant portion of the system updates will align operations with new policy (NISPOM Change 2). Additionally, updates will continue to improve the user experience and backend maintenance of the system.</p> <p>FY 2018 Plans:</p> <p>1. NISS. Initiate development of NISS Increment 2, subject to availability of funds. Increment 2 will include a SIPR instance of NISS, a Cross-domain Solution, and add enhancements to Security Violations, Security Vulnerability Assessments, and Suspicious Contact Reports. Initiate Independent Verification and Verification (IV&V) and Government Acceptance Testing (GAT) of Increment 2. IV&V and GAT findings will be addressed. Initiate planning of NISS Increment 3.</p> <p>2. NCCS. Continue scheduled enhancements through version releases and continued sustainment. Agile development approach; 2 release cycles per year. Future enhancements will address updates to the New DD254 Form.</p> <p>3. NCAISS. Continue integration and application sustainment activities.</p> <p>4. eFCL. DSS will no longer use eFCL once capabilities have transitioned into NISS.</p> <p>5. ISFD. DSS will retire ISFD once capabilities have transitioned into NISS.</p> <p>FY 2019 Plans:</p> <p>1. NISS. Complete development of NISS Increment 2. Deploy NISS Increment 2 in 2Q FY19. Initiate development of NISS Increment 3. Increment 3 will include enhancements to KMP monitoring, NATO CPI, Triage Outreach Program, NISP Oversight Report, and Outgoing Foreign Visits. Initiate Independent Verification and Verification (IV&V) and Government Acceptance Testing (GAT) of Increment 2. IV&V and GAT findings will be addressed.</p> <p>2. NCCS. Continue scheduled enhancements through version releases and continued sustainment. Agile development approach will continue with 2 release cycles per year. We will address any findings/bugs/issues encountered from Independent Verification and Verification (IV&V) and Government Acceptance Testing (GAT).</p> <p>3. NCAISS. Final option year on current contract completed and NCAISS will be in full operational capability (FOC) sustainment. Complete final transition activities for NCAISS over to Data Center Operations. Long-term sustainment actions will then be assumed by ITSS contract support. Continue integration and application sustainment costs, with some software upgrades.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service		Date: February 2018		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>	Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Address findings/bugs/issues encountered from Independent Verification and Verification (IV&V) and Government Acceptance Testing (GAT) as needed. FY 2018 to FY 2019 Increase/Decrease Statement: The increase project costs from FY18 to FY19 can be attributed to the new SIPR infrastructure required for NISS Increment 2. Increment 2 will require expanded licensing for Oracle OBIEE and licensing required from the company Software AG Government Solutions (SAGGS) which were not originally taken into consideration. The application will also introduce new cost drivers such as Cross Domain Solution (CDS) and expanded MilCloud footprint as DSS moves forward to comply with the DoD mandate of Cloud-First. NISS will be a driver for secondary/COOP utilization of MilCloud services.				
Accomplishments/Planned Programs Subtotals		4.241	4.565	9.750
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy DSS will use a variety of acquisition appropriate vehicles such as Indefinite Delivery, Indefinite Quantity (IDIQ), Blanket Purchase Agreements (BPA), and multiple or single award contracts for the development of new applications, enhancement of other applications, and perform system integration with COTS and GOTS solutions and technology. These efforts will significantly reduce the lead time in contract award process and reduce overhead contract cost, improve technical solutions and deployments, and deliver more effective and efficient automation projects for DSS and the NISP community.				
E. Performance Metrics N/A				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / Enterprise Security System (ESS)	Project (Number/Name) 000 / Enterprise Security System (ESS)
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
NISS Development	C/TBD	TBD : TBD	108.123	3.243	May 2017	2.939	May 2018	8.208	May 2019	-		8.208	Continuing	Continuing	-
NISS Development/ MilCloud	MIPR	DISA : Pensacola, FL	0.000	0.000		0.600	May 2018	0.500	May 2019	-		0.500	Continuing	Continuing	-
NCAISS Development	Option/ BPA	Deloitt : Arlington VA	3.200	0.266	Nov 2016	0.274	Nov 2017	0.000		-		0.000	Continuing	Continuing	-
NCCS Development	MIPR	DLA : Philadelphia, PA	2.103	0.596	Oct 2016	0.613	Oct 2017	0.800	Oct 2018	-		0.800	Continuing	Continuing	-
SBIR/STTR	MIPR	AT&L : Arlington, VA	0.968	0.136	May 2017	0.139	May 2018	0.242	May 2019	-		0.242	Continuing	Continuing	-
Subtotal			114.394	4.241		4.565		9.750		-		9.750	Continuing	Continuing	N/A
Project Cost Totals			114.394	4.241		4.565		9.750		-		9.750	Continuing	Continuing	N/A

Remarks
 The Enterprise Security System supports development efforts of the next generation of integrated enterprise automated solutions which replaces DSS legacy IT systems. The ESS architecture will provide seamless integration of other DSS systems and applications such as eFCL, OBMS, NCCS and mobile workforce applications.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Security Service		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>	Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Enterprise Security System																												
Production and Deployment of Applications																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Security Service		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System (ESS)</i>	Project (Number/Name) 000 / <i>Enterprise Security System (ESS)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Enterprise Security System</i>				
Production and Deployment of Applications	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305327V I Insider Threat
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	11.203	5.034	5.365	5.954	-	5.954	1.964	0.000	0.000	0.000	Continuing	Continuing
002: Insider Threat	11.203	5.034	5.365	5.954	-	5.954	1.964	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The DoD Insider Threat Management and Analysis Center (DITMAC): Oversees the mitigation of insider threats to DoD and U.S. Government installations, facilities, personnel, missions, or resources; Assess enterprise-level risks, refer recommendations for action, synchronize responses, and oversee resolution of identified issues on the insider threats; Develops enterprise-level risk reporting criteria (thresholds) to facilitate component reporting of potential threat information and assess the effectiveness of actions taken by reporting elements to address, mitigate, or resolve the threat posed to DoD missions and resources; Supports the Office of the USD(I) in establishing standards to ensure that the DoD Insider Threat Program complies with applicable statutes, Executive orders, and other national and DoD regulations and policies that specify insider threat program requirements; Provides a single repository for enterprise-level DoD insider threat-related information; and Promotes the collaboration and sharing of insider threat information among DoD Components.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	5.034	5.365	0.000	-	0.000
Current President's Budget	5.034	5.365	5.954	-	5.954
Total Adjustments	0.000	0.000	5.954	-	5.954
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• One Time Adjustment	0.000	-	5.954	-	5.954

Change Summary Explanation

Investments are required in technology and analytic capabilities to improve efficiencies to enable offsets future manning requirements across the DoD Insider Threat Enterprise and minimize human risk exposure.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305327V / <i>Insider Threat</i>				Project (Number/Name) 002 / <i>Insider Threat</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
002: <i>Insider Threat</i>	11.203	5.034	5.365	5.954	-	5.954	1.964	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD Insider Threat Management and Analysis Center (DITMAC): Oversees the mitigation of insider threats to DoD and U.S. Government installations, facilities, personnel, missions, or resources; Assess enterprise-level risks, refer recommendations for action, synchronize responses, and oversee resolution of identified issues on the insider threats; Develops enterprise-level risk reporting criteria (thresholds) to facilitate component reporting of potential threat information and assess the effectiveness of actions taken by reporting elements to address, mitigate, or resolve the threat posed to DoD missions and resources; Supports the Office of the USD(!) in establishing standards to ensure that the DoD Insider Threat Program complies with applicable statutes, Executive orders, and other national and DoD regulations and policies that specify insider threat program requirements; Provides a single repository for enterprise-level DoD insider threat-related information; and Promotes the collaboration and sharing of insider threat information among DoD Components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Insider Threat	5.034	5.365	5.954
<p>Description: DITMAC will provide the Department's first truly quantitative and qualitative analytic overview of insider threat related risk trends, which will significantly inform future decision making. The DITMAC follows an analytics-driven approach to assessing risk and endeavors to employ a rigorous science-driven approach to addressing risk and risk mitigation as it pertains to Insider Threat in the Department. Automating insider threat reporting, and aggregating data from throughout the DoD and federal government will potentially save lives and money through thwarting insider threats and leaks. Automation of integrated tools will offset increasing manpower needs. The system will also be available to the components for use, reducing the costs overall for new Insider Threat system development and sustainment throughout the DoD.</p>			
<p>FY 2017 Accomplishments: Continued development of existing capabilities to better serve the insider threat community, while beginning the system re-architecture design to make the technical capabilities more flexible and adaptable, increasing communication/information sharing, decreasing cyber vulnerabilities, and cost savings each year in software licensing and technical support. Initial pilot deployment to 11 DoD Components for use as internal case management system.</p>			
<p>FY 2018 Plans: Continued development/refinement of the DSoS; development of advanced analytic tools; assessment of new technologies and interfaces for enabling external communication with the DSoS.</p>			
<p>FY 2019 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Security Service		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305327V / <i>Insider Threat</i>	Project (Number/Name) 002 / <i>Insider Threat</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Enhancements to the new platform; development and integration of additional advanced analytic capabilities; assessment of new technologies and interfaces between security domains and with external data sources on behalf of the enterprise.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Investments are required in technology and analytic capabilities to improve efficiencies to enable offsets future manning requirements across the DoD Insider Threat Enterprise and minimize human risk exposure.			
Accomplishments/Planned Programs Subtotals	5.034	5.365	5.954

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

TBD

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305327V / <i>Insider Threat</i>	Project (Number/Name) 002 / <i>Insider Threat</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DITMAC System Of Systems	C/CPFF	NOVETTA : Mclean, VA	11.203	5.034	Sep 2017	5.365	Sep 2018	5.954	Sep 2019	-		5.954	Continuing	Continuing	-
Subtotal			11.203	5.034		5.365		5.954		-		5.954	Continuing	Continuing	N/A
Project Cost Totals			11.203	5.034		5.365		5.954		-		5.954	Continuing	Continuing	N/A

Remarks
 Funding will further enhance the capabilities of the Insider Threat program to deter, detect and mitigate threats through establishment and operation of the Defense Insider Threat Management and Analysis Center and the successful implementation of Continuous Evaluation.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305327V / <i>Insider Threat</i>	Project (Number/Name) 002 / <i>Insider Threat</i>
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FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Insider Threat</i>	
Production Development	

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Insider Threat</i>	
Production Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Security Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305327V / <i>Insider Threat</i>	Project (Number/Name) 002 / <i>Insider Threat</i>
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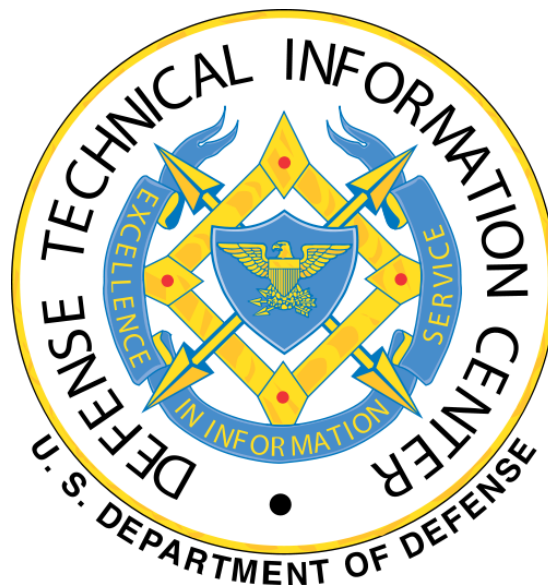
Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Insider Threat</i>				
Production Development	4	2015	4	2020

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Defense Technical Information Center

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Research, Development, Test & Eval, DW				58,332	58,332
Total Research, Development, Test & Evaluation				58,332	58,332

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

29 Jan 2018

<u>Appropriation</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Research, Development, Test & Eval, DW	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977

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Department of Defense
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests* with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Management Support	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		

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 (Dollars in Thousands)

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	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities					
Management Support			58,332		58,332
Total Research, Development, Test & Evaluation			58,332		58,332
Summary Recap of FYDP Programs					
Research and Development			58,332		58,332
Total Research, Development, Test & Evaluation			58,332		58,332

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 (Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977
Summary Recap of FYDP Programs			
Research and Development	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Management Support	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Management Support				58,332		58,332
Total Research, Development, Test & Evaluation				58,332		58,332
<u>Summary Recap of FYDP Programs</u>						
Research and Development				58,332		58,332
Total Research, Development, Test & Evaluation				58,332		58,332

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<u>Summary Recap of Budget Activities</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Management Support	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977
<u>Summary Recap of FYDP Programs</u>			
Research and Development	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Defense Technical Information Center	48,234	58,332	58,332		
Total Research, Development, Test & Evaluation	48,234	58,332	58,332		

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Defense Technical Information Center				58,332	58,332
Total Research, Development, Test & Evaluation				58,332	58,332

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Total Obligational Authority
(Dollars in Thousands)

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Defense Technical Information Center	60,977		60,977
Total Research, Development, Test & Evaluation	60,977		60,977

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
161	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	54,145	54,145			U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,187	4,187			U
		Management Support		48,234	58,332	58,332			
Total Research, Development, Test & Eval, DW				48,234	58,332	58,332			

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	S	
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs		Remaining Req with CR Adj Base + OCO + Emergency
161	0605801KA	Defense Technical Information Center (DTIC)	06				54,145		54,145	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06				4,187		4,187	U
		Management Support					58,332		58,332	
Total Research, Development, Test & Eval, DW							58,332		58,332	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
161	0605801KA	Defense Technical Information Center (DTIC)	06	56,853		56,853	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,124		4,124	U
		Management Support		60,977		60,977	
Total Research, Development, Test & Eval, DW				60,977		60,977	

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Defense Technical Information Center
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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
161	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	54,145	54,145			U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,187	4,187			U
		Management Support		48,234	58,332	58,332			
Total Defense Technical Information Center				48,234	58,332	58,332			

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S e c
161	0605801KA	Defense Technical Information Center (DTIC)	06				54,145		54,145	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06				4,187		4,187	U
		Management Support					58,332		58,332	
Total Defense Technical Information Center							58,332		58,332	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
161	0605801KA	Defense Technical Information Center (DTIC)	06	56,853		56,853	U
165	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,124		4,124	U
		Management Support		60,977		60,977	
Total Defense Technical Information Center				60,977		60,977	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	163.946	43.834	54.145	56.853	-	56.853	58.411	60.348	62.273	63.375	Continuing	Continuing
001: <i>Defense Technical Information Center</i>	145.397	38.086	49.071	51.837	-	51.837	53.395	55.332	57.257	58.359	Continuing	Continuing
002: <i>Information Analysis Centers</i>	18.549	5.748	5.074	5.016	-	5.016	5.016	5.016	5.016	5.016	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Technical Information Center's (DTIC) unique mission is to aggregate and fuse science and technology data to provide rapid, accurate, and reliable knowledge to researchers and developers of the next generation of technologies needed to assure our national security. DTIC, a DoD Field Activity, is the DoD's singular executive agent and designated source for DoD-funded scientific, technical, engineering, and industry-related information. DTIC also operates DoD Information Analysis Centers (IACs) focused on Defense Systems, Cyber Security and Information Systems, and Homeland Defense and Security.

Each year, DoD invests over \$13.0 Billion in research, development and procurement of advanced technologies needed to defend our nation. DTIC preserves the fruits of these costly labors for reuse across the enterprise. As an efficient and cost-effective steward of technical information, DTIC collects data and provides answers to researchers seeking state-of-the-art data relevant to their projects. Through this interchange of information DTIC accelerates innovation and prevents duplication of experiments, tests, and prototyping activities because researchers can build on what has been done or choose other paths if prior research resulted in a dead end. Using DTIC-created forums, researchers, Warfighters, and industry partners can also rapidly collaborate and connect across the DoD research and engineering (R&E) enterprise. Finally, DTIC provides a department-level map of R&D activity. This map gives decision-makers insight into current and past research, highlighting where progress is being made and by whom. Through the preservation and sharing of the results of billions of dollars of past DoD investments, DTIC increases the return on past investments and accelerates current efforts, saving the Department precious time and dollars. Through its collaboration tools and outreach to the R&E community, DTIC connects researchers across the lab enterprise, to include researchers and engineers, Warfighters and DoD's industry partners.

DTIC's strategic themes center on customer focus, innovation, operational excellence, and strategic partnering. In support of these themes, DTIC's organizational efforts are focused on the following priority areas:

- 1) Search: Develop new algorithms that enable our users to quickly discover useful information and to ensure we present the most relevant information. Expand and enhance our data collections to improve the quality and completeness of the data.
- 2) Collaboration: Provide collaboration platforms for the DoD science and technology community to work together on investments that efficiently deliver solutions to the Warfighter.
- 3) Access Identity: Strengthen methods of user authentication through the use of public key infrastructure (PKI) tokens, biometrics and other methods to grant access to recognized, trusted and authorized users. Protect intellectual property (IP) and industry proprietary data assets entrusted to DTIC's stewardship (protect information access).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center Date: February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>
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- 4) Data Fusion/Analysis: Gather information from multiple data sources and provide knowledge products that fuse the disparate data sets into a single view of the life cycle of research. Present an overarching picture of research investment that enables decision-makers to link multiple efforts with integrated capabilities (employ resources to highest priority efforts and coordinate efforts across Services).
- 5) Cyber Security: Continue to leverage state-of-the art technologies, processes and practices designed to protect DTIC networks, computers, programs and data from attack, damage or unauthorized access.
- 6) Data Center Optimization/Cloud: Migrate services to cloud providers to improve availability, redundancy, and mission flexibility; to reduce time to deliver new capabilities; to save costs; and to enhance cyber security.

DTIC recognizes the need to accomplish its mission while increasing the value of its services and products. DTIC has reduced its headquarter staffing, physical footprint, civilian personnel and support contractors. DTIC has restructured the IAC program, and continues to consolidate its data center.

Recently, DTIC has taken on additional programs, to include its new role in leading the Department in efforts to provide public access to DoD-funded journal articles and research data and increase outreach to industry through DTIC's Defense Innovation Marketplace. In addition, DTIC is sponsoring the publication of a quarterly DoD R&E Journal. The purpose of the Journal is to share controlled unclassified and classified information throughout the R&E community, reduce exfiltration of information, and to serve as a vehicle to recognize talented individuals in sensitive technology areas. Moreover, DTIC activities promote citizen science. Citizen science mobilizes the public to engage in the scientific process and thereby address real-world problems. Citizen scientists identify research questions, collect and analyze data, interpret results, make new discoveries, develop technologies and applications, and solve complex problems. DTIC continues to ensure its activities are efficient and effective, meet users' expectations, and employ industry best practices and standards, while protecting its wealth of information from cyber threats.

DTIC's restructured Information Analysis Centers (IACs) drive innovation and technological development by anticipating and responding to the information needs of the defense and broader community. The IAC Program Office provides core funding, management and oversight of three IACs, which are chartered by DoD to collect, analyze, and disseminate worldwide scientific and technical information in specialized fields. The IAC multi-award task order contracts ensure that new research, analysis, and development builds on prior investments and puts to work the best practices of government, industry, and academia. The IAC approach was identified as a "best practice" by the Director of Defense Procurement and Acquisition Policy in a January 2015 memo wherein he promoted maximum use of the IAC contracts across DoD. The IACs are structured into three application areas: Cyber Security and Information Systems, Homeland Defense and Security, and Defense Systems. As part of the Department's acquisition improvement initiatives, the IAC multi-award contracts enhance competition, increase usage of small businesses, and reduce costs. For the last several years, competition inherent in the IAC model has produced savings of 17-25 percent over projected costs, delivering vetted technical expertise to address many of the complex challenges DoD faces. An independent assessment by the Center for Strategic and International Studies reported that the IACs improve affordability, productivity, and standardization within defense acquisition programs. Providing the acquisition enterprise access to thousands of industry subject matter experts, DTIC's IACs perform over \$1.0 Billion of customer-funded research and prototyping annually. The results of the work are a rich source of new material in DTIC's information asset collections and are available to users across the Department (and other federal agencies, e.g., Department of Energy, Department of Homeland Security).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>
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This Program Element (PE) supports DTIC mission operations. DTIC focuses on three core mission areas (Collection, Dissemination and IACs) and purchases space and shared services (e.g., human resources (HR); financial management; contracting; IT security; communications; and civilian payroll services) from expert and efficient DoD providers.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	43.834	54.145	57.647	-	57.647
Current President's Budget	43.834	54.145	56.853	-	56.853
Total Adjustments	0.000	0.000	-0.794	-	-0.794
• Congressional General Reductions	0.000	-			
• Congressional Directed Reductions	0.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Change	-	-	-0.794	-	-0.794

Change Summary Explanation

Program Change: The FY 2019 Base program reduction (-\$0.794 Million), as compared to the Previous President's Budget FY 2019 PB Base, reflects a net change resulting from the following: 1) a program adjustment levied by the Department, and 2) economic price adjustments.

FY 2019 Service Requirements Review Board (SRRB) Reduction: The FY 2019 program includes a \$0.740 Million reduction in accordance with the Department's recent service contract downsizing effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>				Project (Number/Name) 001 / <i>Defense Technical Information Center</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
001: <i>Defense Technical Information Center</i>	145.397	38.086	49.071	51.837	-	51.837	53.395	55.332	57.257	58.359	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DTIC is responsible for developing, coordinating and enabling a strong scientific and technical information (STINFO) program for the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) and the DoD scientific & technical (S&T) enterprise. In this role, DTIC sets policy for scientific and technical information (STI) exchanges for the research and engineering (R&E) community. DTIC's aim is to maximize the availability and use of technical information and products resulting from Defense-funded technical activities while ensuring restrictions to safeguard national security, export control, and intellectual property rights.

Recognizing the common elements across budget justification documents, progress reports, completed work reports, studies, and journal articles, DTIC is mapping relationships to enable users to access the life cycle of research projects from planning to final results. DTIC employs information technology to verify and validate information submitted and improve user confidence in DoD research documentation.

DTIC is leading the Department's efforts to implement public access to published journal articles, and digital data from research funded by taxpayers. In this role, DTIC is actively working with partners across the Services, components, other federal agencies and publishers. These ongoing efforts directly complement and support the Department's objectives associated with Citizen Science. Consistent with the Administration's (Office of Management and Budget) emphasis for open standards and machine readable formats, DTIC initiated the transition from paper and Portable Document Format (PDF) based information to Web Service Extensible Markup Language (XML) standard data submission and machine readable delivery. DTIC partnered with the OSD Comptroller to collect investment account budget justification documentation in XML and embed this XML in PDF for justification books delivered to Congress. DTIC employed this same technology in collecting S&T progress reports from the Services and Agencies, and Independent Research and Development (IR&D) data from industry. DTIC is planning the migration of its completed technical reports collection to the same open standards, i.e., machine readable formats.

Through the use of commercial search technology, DTIC provides search capability that links its knowledge of the DoD domain and metadata to support both text searches and data mining. DTIC continually works to enable additional features within our search capabilities and from commercial partners to improve information discovery and relevance.

DoD conducts science and technology research via the following means: 60+ labs, Federally Funded Research and Development Centers (FFRDCs), DTIC's Information Analysis Centers (IACs), and other contracts and grants. Spanning over a dozen distinct priority area communities of interest, the results of this work are available through DTIC's web-based R&E Gateway. To protect this information, DTIC regulates access through a database of registered users. In addition, DTIC uses commercial software in compliance with DoD Identity Management Standards to provide instant authenticated access to users of the DoD Common Access Card (CAC)/Federal Government Personal Identity Verification (PIV) cards, industry PIV-I cards or External Certificate Authority (ECA). DTIC's unclassified assets, tools and community interaction capabilities foster innovation, competition and identification of solutions in an access-controlled environment.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

Focus on User Communities and Distribution Points: DTIC supports user communities on the network where they work, i.e., NIPRNET, SIPRNET and public internet, and uniquely provides access controls within unclassified and classified material to protect intellectual property in our search, distribution, and collaboration tools.

- DoD's RDT&E Enterprise: As a Field Activity to ASD(R&E)/AT&L, DTIC's priority is the RDT&E enterprise, hosting information assets and tools on the NIPRNET (the primary network for the community).

- Warfighter: Improving coordination between the acquisition enterprise and warfighter communities, DTIC hosts a subset of information assets and tools on the SIPRNET. DTIC is working to expand the availability of science and technology (S&T) information, to include Independent Research and Development (IR&D), on the SIPRNET. DTIC is continuing its efforts to establish parity of information and capabilities on applications hosted on both NIPRNET and SIPRNET platforms.

- Industry and Academia via Public Internet: Engaging industry outside the NIPRNET firewall to support acquisition improvement initiatives and encourage the introduction of innovation, DTIC hosts unclassified public information and tools accessible to all users on the Internet. The Public Access initiative adds importance to the public distribution point, to encourage technology transfer of basic and public research to the private sector, and to give an economic boost to small businesses that can use that data to provide new applications to consumers.

Summary. DTIC protects and preserves DoD's multi-billion dollar investment in research, which empowers the acquisition enterprise through innovative tools, information systems, and decision support capabilities. The efficiency benefits can be enormous. Each 1 percent increase in the reuse of S&T efforts produces over \$100 Million in savings that can be redirected. Those savings come from elimination of inefficient redundancy (and unnecessary delays), increased community interaction, and ultimately, a more capable military. DTIC is uniquely positioned to support and to ensure the value of DoD's R&D portfolio is fully realized.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Title: Defense Technical Information Center</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Deliver customers the capability to apply flexible search strategies across all DTIC collections. -- Continue to integrate search and analysis capabilities across all collections on SIPRNET and NIPRNET for improved analysis and discovery of information. -- Complete upgrade and update to the main DTIC NIPR and SIPR search interface to incorporate new search capabilities and improve the user experience with DTIC search products. -- Complete transition of all search capabilities to the Master Data Repository (MDR); discontinue the DTIC Google Search Appliances (GSA). - Provide capability to automate processing of public release content to eliminate backlog, and enable rapid availability. -- Reduce the footprint of multiple technologies and retire the 25 year-old legacy system to drive efficiencies and reduce cost of ownership. - Conduct an analysis of alternatives to support the advancement of user access and identity management capabilities. 	38.086	49.071	51.837

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> -- Review and investigate innovative commercial technologies and available government offerings. -- Develop requirements; establish a Subject Matter Expert (SME) position; track industry technology advancements. - Leverage the DTIC Thesaurus to enhance search results. Continue the improvement of real-time analysis of incoming records to promote exploration and discovery. - Help the defense community locate the most relevant technical information by leveraging the Master Data Repository (MDR) solution. -- Expose richer Technical Reports metadata to NIPR users, ingest 2018 R2/P40 content, and implement Health assessment recommendations. -- Initiate the streamlining of process data flows to public search products, reducing maintenance and data copies, facilitating cloud migration, and providing richer metadata to include both Digital Object Identifiers (DOIs, a unique identifier assigned to a particular document so it can always be found) and public journal articles. -- Assess data quality in primary collections and begin addressing issues with the greatest impact. - Broaden and expand DTIC collections to include material from the Department's Rapid Fielding and Prototyping communities, which fall under the Research, Development, Test, and Evaluation (RDT&E) Budget Activity (BA) 4, Advanced Component Development and Prototypes (ACD&P). -- Develop, build and foster collaboration, partnerships, and business relationships with leadership elements from within these communities. - Collaborate with the DoD Intelligence community and other AT&L representatives on policy and implementation of the new Controlled Unclassified Information (CUI) federal marking regulations, as DoD continues to negotiate with the Federal CUI Executive Agent on implementation appropriate for DoD, and rewrites the guidance for marking DoD documents. - Support DoD's public access effort; conduct outreach and educate intramural and extramural researchers on the requirement to submit journal articles to DTIC. -- Collaborate with the DoD laboratories to design an efficient, integrated submission mechanism for all types of public access information. -- Implement contractors/grantees input capability for journal articles. -- Enhance public access search to include both new and legacy journal articles submitted to DTIC, combined with pointers to publisher versions. -- Begin to accept voluntary input of metadata pointing to public or limited dissemination data sets. -- Initiate an independent study and a prototype to examine options for the management of digitally formatted scientific datasets. -- Evaluate dataset dissemination capabilities. -- Collaborate with other federal agencies to acquire multi-funded journal articles, streamlining the burden on contractors/grantees to comply with public access requirements. - Deliver customer-driven features based on an improved understanding of customer successes and experiences on DTIC sites. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> -- Implement decision-based metrics across primary DTIC products to improve DTIC's ability to understand customer behavior and make business decisions on investments in products and services. -- Deliver capability for DTIC program managers and product owners to have full visibility and transparency on product usage, customer trends, and customer tendencies in products and services. This will allow full visibility on all user actions and interactions in the search user interface, and fully capture user successes by measuring downloads, bibliography builds and exports, and user paths through the interfaces. - Conduct initial planning to establish a functional IT Continuity of Operations (COOP) capability for DTIC. -- In conjunction with Cloud migration planning, complete an IT COOP analysis in order to produce an approved and executable IT COOP plan. Review commercial technologies and government offerings. -- Integrate effort with concurrent cloud services planning to provide required infrastructure to support and sustain the future IT COOP environment. -- Design cyber Risk Management Framework (RMF) documentation and accreditation; conduct initial system engineering to ensure the highest availability of future services. - After 2017's successful migration of the initial websites to commercial cloud providers, DTIC will continue the planning and migration of DTIC's information, systems and services to a Cloud based infrastructure. -- DTIC will complete an assessment and detailed plans for its migration to the Cloud to build a Cloud-based infrastructure that maximizes flexibility both in capability and acquisition of services, provides redundancy, improves reliability, and provides robust cyber security for all DTIC information systems. -- Develop a plan to determine options in support of a Cloud based production environment for DTIC's unlimited unclassified information and systems. -- Begin the design of a cloud architecture to create an optimal cloud environment that will improve the customer support experience, reduce cost and labor, capture user data, and improve security posture in order to meet DoD Data Center reduction goals. -- Plan the transition stages for phasing DTIC's public, NIPRNET, and SIPRNET activities to a Cloud environment. -- Develop and design the Risk Management Framework (RMF) controls for a new DTIC Cloud environment; prepare accreditation documentation and an update to the Authority to Operate (ATO). -- Design the integration of Single Sign-On capabilities, User Registration Systems, and public key infrastructure (PKI) authentication methods for a new DTIC Cloud environment. -- Explore options to establish a contract or service level agreement with an organization or company to facilitate DTIC's transition from its Data Center to a Cloud Service Provider. Ensure progress is synchronized with DoD cloud efforts, approved platforms, and contract vehicles. -- Construct a flexible cost model to track true cost of ownership in order to share costs with DTIC customers and better track internal expenditures. -- Continue the successful migration of public sites to a commercial or government-provided cloud/data center. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>- Research and investigate innovative commercial and open source technologies needed to field mobile capabilities in support of user devices, operating systems, and browsers.</p> <p>-- Conduct an analysis of alternatives to support development of mobile capabilities.</p> <p>-- Develop initial plans for incorporating mobile technologies to include metrics, software development, testing, and cyber security.</p> <p>-- Begin development of a prototype mobile application for searching DTIC public data.</p> <p>- Establish and publish the initial R&E Journal at the CUI and Classified levels.</p> <p>-- Use the Journal to share information throughout the R&E community, and as a vehicle to recognize individuals in sensitive technology areas.</p> <p>FY 2019 Plans:</p> <p>- Deliver the next generation Search and Discovery capability, allowing customers to gain intricate knowledge of DTIC data and collections, the ability to use that data in a variety of ways, and to analyze that data through a single user-oriented solution.</p> <p>-- Collapse multiple user interfaces that are used to access the same data sets into a consolidated user interface that has multiple functionalities.</p> <p>-- Complete the exposure of Marklogic functionalities in this next generation Search and Discovery user interface.</p> <p>-- Enhance the user's ability to package relevant information generated through search and discovery for their use in research papers, presentations, and analysis and decision tools.</p> <p>-- Continue to encourage DoD adaptation and use of persistent open source identifiers, such as Open Researcher and Contributor ID (ORCID), in order to build complete author profiles and establish links to the author's technical documents contained within the collection.</p> <p>-- Improve relevance of user search and discovery results, including use of semantic technologies to pre-process metatag/label/ categorize material and to expand user search terms at runtime in order to help users--who are not experts--locate information to answer questions.</p> <p>-- Develop enhanced mobile technologies focused on mobile applications search and discovery.</p> <p>- Continue to develop Access and Identity Management technologies to further protect DTIC data and enhance visibility of a user's path through DTIC products and services.</p> <p>-- Initiate implementation of a commercial off-the-shelf access and identity management system that replaces the current DTIC Registration system on both NIPR and SIPR.</p> <p>- Enable the defense community to locate the most relevant technical information by leveraging the Master Data Repository (MDR) solution.</p> <p>-- Initiate effort to surface richer metadata describing Information Analysis Center (IAC) Technical Reports.</p> <p>-- Initiate development of Application Programming Interface (API) for organizations to pull data from MDR and to federate searches to MDR.</p> <p>-- Establish links across data, enabling integrated displays of project, organization, topic, and user data.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Implement MDR internal interfaces for the DTIC staff to test the system, manage content, and assist users. - Continue to broaden and expand DTIC collections to include material from the Department’s Rapid Fielding and Prototyping communities, which fall under the Research, Development, Test, and Evaluation (RDT&E) Budget Activity (BA) 4, Advanced Component Development and Prototypes (ACD&P). <ul style="list-style-type: none"> -- Continue to develop, build and foster collaboration, partnerships, and business relationships with leadership elements from within these communities. - Collaborate with the DoD Intelligence community and other AT&L representatives on policy and implementation of the new Controlled Unclassified Information (CUI) federal marking regulations, as DoD rewrites the guidance for marking DoD documents. <ul style="list-style-type: none"> -- Create requirements for changes to DTIC systems in support of the new CUI Framework, and begin the development process for initial systems. - Support DoD’s public access effort; conduct outreach and educate intramural and extramural researchers on the requirement to submit journal articles to DTIC. <ul style="list-style-type: none"> -- Implement an automatic authentication method for contractors/grantees journal article input. -- Initiate development of a catalog/locator of data sets using discovery and descriptive metadata, along with the capability to send metadata for public data sets to data.gov. -- Establish a pilot project to accept submissions of data management plans (DMPs) for DoD-funded research programs. -- Integrate the search and display features of existing DTIC products with public access materials. -- Examine the feasibility of integrating other federal agency submission flows for publications, metadata and/or data sets in order to reduce the burden of multi-funded researchers, and aid in compliance measures. -- Extend existing collaborations with other federal agencies to comply with public access requirements. - Expand customer outreach efforts to the R&E community. <ul style="list-style-type: none"> -- Build and foster relationships to further enable scientific collaboration by researchers, scientist, and engineers across the services. -- Further engage Communities of Interest (COIs), DoD Labs and Combatant Commands (CCMDs) for DTIC growth opportunities. -- Continue to reach out to industry partners in order to share both information and DoD customer requirements. -- Seek out new opportunities supporting collaboration. - Achieve and maintain SIPRNET parity in the DTIC Information Technology (IT) environment. <ul style="list-style-type: none"> -- Ensure the DTIC Information Technology (IT) infrastructure and equipment can fully provide DTIC’s capabilities equally to users on SIPRNET and NIPRNET. - Establish and maintain a fully functional IT Continuity of Operations (COOP) capability for DTIC’s unclassified infrastructure. <ul style="list-style-type: none"> -- Achieve Full Operational Capability (FOC) for reliable data management to include data backup and restoration of DTIC information. -- Complete an approved and executable IT COOP plan; plan and design SIPRNET COOP infrastructure. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>-- Fully integrate efforts with concurrent Cloud services planning to provide required infrastructure to support and sustain the future COOP environment.</p> <p>-- Complete the design and implementation of the cyber security architecture; implement Risk Management Framework (RMF) continuous monitoring for full COOP capabilities.</p> <p>- Continue the migration of DTIC's information systems and services to Cloud based infrastructure.</p> <p>-- Align with DoD cloud efforts; leverage enterprise-wide solutions, platforms, and contract vehicles.</p> <p>-- Complete the migration of DTIC's public infrastructure to Cloud environments as planned, allowing DTIC staff to focus on more complex activities, and improving IT infrastructure availability.</p> <p>-- DTIC will have an approved Authority To Operate (ATO) with a continuously monitored Risk Management Framework (RMF) for its Cloud-based IT infrastructure, strengthening its Cyber security posture.</p> <p>-- Implement Cloud based identity management system enhancements and actionable user metrics.</p> <p>-- Complete the establishment of well-defined processes and procedures for operating in the Cloud environments.</p> <p>-- Establish DTIC contracts and service level agreements with selected Cloud Service Providers (CSP).</p> <p>- Implement innovative commercial technologies needed to field mobile capabilities in support of user devices (desktops, laptops, tablets, etc.), operating systems, and browsers.</p> <p>-- Support with authenticated user access.</p> <p>-- Ensure the DTIC Information Technology (IT) infrastructure and equipment can fully support mobile capabilities.</p> <p>- Continue to publish R&E Journal at the CUI and Classified levels in order to share information throughout the R&E community.</p> <p>-- Expand marketing and awareness of the Journal; seek out a broader pool of article contributors to the Journal.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i></p> <p>In the FY 2018 President's Budget, the Department recapitalized DTIC across the FYDP. The \$2.77 Million increment in the FY 2019 PB builds upon FY 2018 activities and progress towards meeting urgent operational mission requirements:</p> <ul style="list-style-type: none"> - Improvements to DoD search tools. - Identity management and information protection. - Re-establishment of an IT COOP. - Parity of services on SIPRNET. - Migration to cloud services. - Support of Public Access/citizen science. <p>Critical efforts are included in FY 2019:</p> <ul style="list-style-type: none"> - Address technology shortfalls in user interface and the continuing migration of users to mobile devices. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
- The Department's implementation of Controlled Unclassified Information (CUI) marking.			
Accomplishments/Planned Programs Subtotals	38.086	49.071	51.837

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Figures reflect FY 2017 end-of-year data.

Total Unique DTIC NIPRNET Users: 27,711
 Total Unique DTIC SIPRNET Users: 6,160
 Total Unique IAC (CSIAC, DSIAC, and HDIAC) Users: 94,445
 Total DTIC Users: 128,316

Total scientific and technical information (STI) holdings in DTIC collections: 4.195 Million

STI added and updated to DTIC Collection: 89,665
 - Total STI (NIPRNET and SIPRNET) Added: 78,645
 - Total STI (NIPRNET) Updated: 11,020

STI records downloaded to Public: 45.6 Million
 Records downloaded to DoD NIPRNET: 965.7 Thousand

Total unique website visits: 17.6 Million
 Total page views: 106.1 Million

IAC Customer Technical Support Requests for Analysis: 5,356

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>					Project (Number/Name) 002 / <i>Information Analysis Centers</i>		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
002: <i>Information Analysis Centers</i>	18.549	5.748	5.074	5.016	-	5.016	5.016	5.016	5.016	5.016	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DoD Information Analysis Centers (IACs), established under DoD Instruction 3200.14, serve as a vital resource in providing timely, relevant information directly to users when and where it is needed. IACs serve as a bridge between the warfighter and the Acquisition/Research community, providing essential technical analysis and data support to a diverse customer base, to include the Combatant Commands (CCMDs), the Office of the Secretary of Defense, Defense Agencies, and the Military Services. IACs actively partner and collaborate with Defense Research and Engineering (R&E) focus groups and communities of interest in areas of specialized fields or specific technologies. The IACs create and maintain comprehensive knowledge analysis centers that include historical, technical, scientific, and other data and information collected worldwide. They are staffed with scientists, engineers and information specialists to provide research and analysis to customers with diverse, complex and challenging requirements. IAC operations directly support the warfighter, and play an ongoing and critical role in solving key CCMD operational issues such as cyber security, unmanned aerial vehicle visual/audible signature reduction, and improvements to the ballistic resistance of body armor.

The IAC Program Management Office at DTIC performs contract acquisition, management, and operational support for IAC contract operations and the technical information that is generated as a result of research and studies. In a time of shrinking budgets and increasing responsibility, IACs are a valuable resource for accessing scientific and technical information culled from efforts to solve new and historic challenges. Direct IAC customer support activities, such as Technical Area Task (TAT) order processing, Basic Center Operations (BCO) support, Defense Finance and Accounting Service (DFAS) activities, contracting/acquisition related activities, etc., are funded in part through partnerships with the Defense R&E community and the annual collection of customer reimbursements for shared direct costs, in accordance with the IAC Reimbursable Review Board (IRRB) recommendations, with OSD-COMPT and Office of General Counsel concurrence. This represents the maximum cost-sharing with IAC customers allowable, per guidance from the OSD Office of General Counsel. Annual IAC efforts and accomplishments are dependent on the level of participation and collaboration by the R&E community at large.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Information Analysis Centers	5.748	5.074	5.016
FY 2018 Plans:			
- Support the DTIC mission to provide technical information to DoD.			
- Provide administrative and operational oversight of basic core contract activities for DoD IACs to collect, analyze, synthesize and disseminate worldwide scientific and technical information (STI) in support of DoD's critical technologies and the warfighter.			
- Respond to technical inquiries and provide in-depth science and technology (S&T) analysis; create and provide STI results via IAC websites; capture STI products from new/on-going analysis tasks; and support the exchange of information among members of the operational and technical communities.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 002 / <i>Information Analysis Centers</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Manage and support Technical Area Tasks (TATs) ordered by the DoD and non-DoD customers; provide program strategy and ensure alignment with Department goals/direction. - Gradual ramp-down of use of ACC Picatinny for processing TAT awards; engage in aggressive customer outreach to initiate processing early. - Award IAC Multiple Award contract, a \$28 Billion contract, to teams of Large and Small Businesses (4th Qtr, FY 2018). <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Support the DTIC mission to provide technical information to DoD. - Provide administrative and operational oversight of basic core contract activities for DoD IACs to collect, analyze, synthesize and disseminate worldwide scientific and technical information (STI) in support of DoD's critical technologies and the warfighter. - Respond to technical inquiries (average 400 per month) and provide in-depth science and technology (S&T) analysis; create and provide STI results via IAC websites; capture STI products from new/on-going analysis tasks; and support the exchange of information among members of the operational and technical communities. - Manage and support Technical Area Tasks (TATs) ordered by the DoD and non-DoD customers; provide program strategy and ensure alignment with Department goals/direction. - Begin making new Task Order awards to the IAC MAC contract (awarded in Sept 2018) from Homeland Defense, Defense Systems, and Cyber Systems contacts; close these contracts to new awards while continuing work on existing Task Orders. - Award Homeland Defense Basic Center of Operations contract by Dec 2018 (1st Qtr, FY 2019). <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p> <ul style="list-style-type: none"> - The decrease in the FY 2019 Base (-\$0.058 Million) reflects contract reductions in concert with the Department's recent service contract downsizing effort. 			
Accomplishments/Planned Programs Subtotals	5.748	5.074	5.016

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Figures reflect FY 2017 end-of-year data.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Technical Information Center		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 002 / <i>Information Analysis Centers</i>
<p>Number of:</p> <ul style="list-style-type: none">- IAC web inquiries: 1,282,692- IAC technical inquiries: 5,356- STI documents added to IAC collection: 23,568- STI documents generated by Technical Area Task (TAT) activities: 3,217- Training or meeting events: 5,208- Number of training attendees: 27,340- Documents uploaded to DTIC's online repository: 70,941 <p>Amount of funding:</p> <ul style="list-style-type: none">- Provided by external customer requesting IAC technical analysis (TAT Funding): \$1.4 Billion- Provided by external customers purchasing IAC information products (Non-TAT funding): \$886,871 <p>Customer satisfaction regarding:</p> <ul style="list-style-type: none">- IAC products and technical inquiry support (scale of 1 to 5, 5 being best): 4.8- IAC TATs and training (scale of 1 to 5, 5 being best): 5.0		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605998KA / <i>Management HQ - Defense Technical Information Center (DTIC)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	4.400	4.187	4.124	-	4.124	3.927	3.979	4.032	4.117	Continuing	Continuing
001: <i>Management HQ - Defense Technical Information Center (DTIC)</i>	0.000	4.400	4.187	4.124	-	4.124	3.927	3.979	4.032	4.117	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element (PE) provides funding for the Management Headquarters (HQ) element of the Defense Technical Information Center (DTIC), a DoD Field Activity to the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)/AT&L). The PE supports personnel compensation for HQ-assigned civilians, along with related administrative support costs. This second DTIC PE, established in FY 2017, is designed to track activities deemed as headquarters functions, with no operational efficiencies or enhancement to mission.

The PE supports the following HQ functions and mission essential activities critical to the success of DTIC's business operations, and mandated by law or regulation:

- Activity leadership, strategic planning, and Front Office support staff.
- The front office staff (6 authorizations) represents a small component of this PE. Most of the specialized functions and skill-sets described below are centralized activities within the PE, yet support the larger organization and its employees. These activities were consolidated as a means to improve efficiencies throughout DTIC, and are essential to the operation of DTIC's primary PE 0605801KA.
- Reductions to DTIC's HQ staffing levels continue, reducing civilian full time equivalents (FTEs) below FY 2017 and FY 2018 levels.
- Financial Management and Comptroller. Provides integrated resource management at the Agency level to obtain, control, and execute budget and manpower authorities to support the organization's mission requirements. Develops and prepares agency budget documents and exhibits for submission to both OSD and Congress.
- Accounting support to DTIC's mission operations; partners with the Defense Finance and Accounting Service to present accurate financial reporting and Fund Balance with Treasury.
- Financial Improvement and Audit Readiness (FIAR) activities and oversight in compliance with the Department's audit goals, objectives, and milestones.
- Human Resources (HR) Liaison Support. Provides the DTIC enterprise with payroll processing and "Hire to Retire" mission support; oversees and organizes employee training, professional development, and certification programs (e.g., Acquisition, Financial Management, and IT programs).
- Coordinates recruitment placement and classification action for the mission areas; liaison to the Defense Finance and Accounting Service for HR servicing and the Defense Logistics Agency (DLA) for Equal Employment Opportunity (EEO) program maintenance.
- Mandatory Records Management compliance activities and administration programs.
- IT Management/Chief Information Officer (CIO). Collects, analyzes, and reports information necessary to effectively and efficiently manage enterprise IT resources; CIO functions are performed in compliance with DoD-CIO guidance, instructions and mandates.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605998KA / <i>Management HQ - Defense Technical Information Center (DTIC)</i>
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- IT Help Desk/Local Area Network (LAN). Office automation supports desktop computing customers; resolves IT-related equipment or system incidents; provides assured system and network availability, info delivery, and secure IT solutions to support current and future business and mission requirements.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	4.400	4.187	3.987	-	3.987
Current President's Budget	4.400	4.187	4.124	-	4.124
Total Adjustments	0.000	0.000	0.137	-	0.137
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Change	-	-	0.137	-	0.137

Change Summary Explanation

Program Change: The FY 2019 Base program adjustment (\$0.137 Million), as compared to the Previous President's Budget FY 2019 PB Base, reflects the Department's addition of one additional civilian Full Time Equivalent (FTE) to the DTIC Management HQ program. This position is in direct support of DoD Financial Improvement and Audit Readiness (FIAR) activities and oversight in compliance with the Department's audit goals, objectives, and milestones.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Title: Management HQ - Defense Technical Information Center	4.400	4.187	4.124
FY 2018 Plans: - Execute the program, activities and functions as described above in Section A, Mission Description of PE 0605998KA.			
FY 2019 Plans: - Execute the program, activities and functions as described above in Section A, Mission Description of PE 0605998KA.			
FY 2018 to FY 2019 Increase/Decrease Statement: The change between FY 2018 and the FY 2019 Base (a net decrease of \$0.063 Million in FY 2019) reflects a net reduction in the number of civilian authorizations assigned to the Management Headquarters element of DTIC.			
Accomplishments/Planned Programs Subtotals	4.400	4.187	4.124

D. Other Program Funding Summary (\$ in Millions)

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Technical Information Center Date: February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605998KA / Management HQ - Defense Technical Information Center (DTIC)
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D. Other Program Funding Summary (\$ in Millions)

Remarks

E. Acquisition Strategy

N/A

F. Performance Metrics

N/A

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Defense Threat Reduction Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense Threat Reduction Agency • Budget Estimates FY 2019 • RDT&E Program

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Exhibit R-1, RDT&E Programs
Defense Threat Reduction Agency
Fiscal Year (FY) 2019 Budget Estimates

Appropriation: RDT&E, Defense-Wide

Date: February 2018

OVERVIEW

The Defense Threat Reduction Agency (DTRA) supports the nation's only Research, Development, Test & Evaluation (RDT&E) program focused specifically on combating and countering the threats posed by weapons of mass destruction (WMD), improvised explosive devices (IEDs), and asymmetric techniques, tactics, and procedures. These threats present immediate, persistent, and evolving risks for our nation's security. Mitigating these risks is a primary DoD priority, and the mission of DTRA. The Agency accomplishes this mission by safeguarding the United States and its allies from WMD, IEDs, and other improvised threats, by integrating, synchronizing, and providing responsive expertise, technologies, and capabilities.

The RDT&E budget funds research and capability development activities supporting efforts across the spectrum of chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) mission space. These efforts meet critical requirements in addressing strategic, operational, and technical challenges associated with WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and monitoring and verification.

The RDT&E portfolio addresses threat-specific technology development as well as number of enabling capabilities. These enabling capabilities include a Basic Research initiative that balances the imperatives of unconstrained exploration, discovery, and experimentation with near- and mid-term priorities arising because of continuously evolving threat environments. This portfolio seeks to facilitate innovative solutions and revolutionary technologies that transition to cost effective threat reduction and defeat capabilities. These enablers also include cutting-edge information science, advanced analytic, and modeling and simulation capabilities, while providing operational, near real-time decision support and technical integration. The RDT&E portfolio also supports end-to-end test event planning, management, safe execution, and results analysis supporting DoD, federal agencies, and friendly nations' programs to counter WMD proliferation and IEDs.

The nuclear technology development portfolio focuses on researching, developing, and demonstrating technologies that support a safe, secure, and effective U.S. nuclear deterrent and prevent nuclear or radiological attacks against the U.S. or its allies. This portfolio addresses nuclear weapons effects for targeting, consequences of execution, and survivability through the development of specific technical capabilities, to include improved modeling and information sharing tools. It also develops survivability standards and technology, and conducts relevant testing activities. Detection and post-detonation nuclear forensics remain significant challenges to security, driving investments in detecting, characterizing and monitoring nuclear and radiological threats and attributing nuclear explosions.

A portfolio focused on countering WMD and improvised threat technologies seeks to develop, demonstrate, and transition innovative technologies and capabilities to actively counter the full spectrum of CBRNE threats. These efforts range from applied research through integration and demonstration of capabilities for specific combat support needs. Specific areas of emphasis include weapons effects and planning, target sensing and characterization technologies, and agent defeat. This portfolio develops the innovative technologies to support WMD sensing and intelligence, surveillance and reconnaissance (ISR) capabilities. This portfolio also integrates many capabilities to address the challenges of characterization and defeat of hardened, deeply-buried targets.

DTRA continually assesses the total RDT&E program with respect to strategic direction, new and emerging requirements, and the current and future threat environment and optimizes it to address requirements while mitigating appropriate risk. This submission focuses on addressing increasing demands for combatant command-specific support to the warfighter; increasing investment in maintaining our organic test infrastructure; continued efforts to leverage collaborative partnerships, particularly with respect to innovative capabilities; and the continued need to balance technical advancement, existing and emerging requirements, and the resources available to meet these challenges. This submission incorporates the request for research and development resources for the Joint Improvised-Threat Defeat Organization previously requested through the Joint Improvised-Threat Defeat Fund appropriation.

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 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	460,982	469,957	469,957		
Total Research, Development, Test & Evaluation	460,982	469,957	469,957		

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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Research, Development, Test & Eval, DW				469,957	469,957
Total Research, Development, Test & Evaluation				469,957	469,957

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 Total Obligational Authority
 (Dollars in Thousands)

25 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Research, Development, Test & Eval, DW	517,188	256,316	773,504
Total Research, Development, Test & Evaluation	517,188	256,316	773,504

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 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Basic Research	34,623	37,201	37,201		
Applied Research	151,028	157,908	157,908		
Advanced Technology Development	260,396	268,607	268,607		
Advanced Component Development And Prototypes					
System Development And Demonstration	4,479	6,241	6,241		
Management Support	10,456				
Total Research, Development, Test & Evaluation	460,982	469,957	469,957		
<u>Summary Recap of FYDP Programs</u>					
Research and Development	460,982	469,957	469,957		
Total Research, Development, Test & Evaluation	460,982	469,957	469,957		

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 (Dollars in Thousands)

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Basic Research				37,201		37,201
Applied Research				157,908		157,908
Advanced Technology Development				268,607		268,607
Advanced Component Development And Prototypes						
System Development And Demonstration				6,241		6,241
Management Support						
Total Research, Development, Test & Evaluation				469,957		469,957
<u>Summary Recap of FYDP Programs</u>						
Research and Development				469,957		469,957
Total Research, Development, Test & Evaluation				469,957		469,957

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 Total Obligational Authority
 (Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-----	-----	-----	-----
Basic Research	37,023		37,023
Applied Research	161,151		161,151
Advanced Technology Development	299,858	13,648	313,506
Advanced Component Development And Prototypes	12,993	242,668	255,661
System Development And Demonstration	6,163		6,163
Management Support			
Total Research, Development, Test & Evaluation	517,188	256,316	773,504
Summary Recap of FYDP Programs			

Research and Development	517,188	256,316	773,504
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Summary Recap of Budget Activities	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO

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Management Support	10,456				
Total Research, Development, Test & Evaluation	460,982	469,957	469,957		
Summary Recap of FYDP Programs					

Research and Development	460,982	469,957	469,957		
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	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----					
Basic Research			37,201		37,201
Applied Research			157,908		157,908
Advanced Technology Development			268,607		268,607
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Total Research, Development, Test & Evaluation			469,957		469,957
Summary Recap of FYDP Programs -----					
Research and Development			469,957		469,957
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Management Support			
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 Summary Recap of FYDP Programs -----			
Research and Development	517,188	256,316	773,504
Total Research, Development, Test & Evaluation	517,188	256,316	773,504

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO

Defense Threat Reduction Agency	460,982	469,957	469,957		
Total Research, Development, Test & Evaluation	460,982	469,957	469,957		

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Defense Threat Reduction Agency				469,957	469,957
Total Research, Development, Test & Evaluation				469,957	469,957

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Defense Threat Reduction Agency	517,188	256,316	773,504
Total Research, Development, Test & Evaluation	517,188	256,316	773,504

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
1	0601000BR	DTRA Basic Research	01	34,623	37,201	37,201			U
		Basic Research		34,623	37,201	37,201			
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	151,028	157,908	157,908			U
		Applied Research		151,028	157,908	157,908			
26	0603134BR	Counter Improvised-Threat Simulation	03						U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	260,396	268,607	268,607			U
		Advanced Technology Development		260,396	268,607	268,607			
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04						U
		Advanced Component Development And Prototypes							
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,479	6,241	6,241			U
		System Development And Demonstration		4,479	6,241	6,241			
153	0605502BR	Small Business Innovation Research	06	10,456					U
		Management Support		10,456					
Total Research, Development, Test & Eval, DW				460,982	469,957	469,957			

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
1	0601000BR	DTRA Basic Research	01				37,201		37,201	U
		Basic Research					37,201		37,201	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02				157,908		157,908	U
		Applied Research					157,908		157,908	
26	0603134BR	Counter Improvised-Threat Simulation	03							U
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122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05				6,241		6,241	U
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1	0601000BR	DTRA Basic Research	01	37,023		37,023	U
		Basic Research		37,023		37,023	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	161,151		161,151	U
		Applied Research		161,151		161,151	
26	0603134BR	Counter Improvised-Threat Simulation	03		13,648	13,648	U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	299,858		299,858	U
		Advanced Technology Development		299,858	13,648	313,506	
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	12,993	242,668	255,661	U
		Advanced Component Development And Prototypes		12,993	242,668	255,661	
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	6,163		6,163	U
		System Development And Demonstration		6,163		6,163	
153	0605502BR	Small Business Innovation Research Management Support	06				U
Total Research, Development, Test & Eval, DW				517,188	256,316	773,504	

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

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	System Development And Demonstration			4,479	6,241	6,241			
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	Management Support			10,456					
Total Defense Threat Reduction Agency				460,982	469,957	469,957			

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Defense Threat Reduction Agency
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 (Dollars in Thousands)

25 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S c
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	Basic Research						37,201		37,201	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02				157,908		157,908	U
	Applied Research						157,908		157,908	
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	Advanced Technology Development						268,607		268,607	
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04							U
	Advanced Component Development And Prototypes									
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05				6,241		6,241	U
	System Development And Demonstration						6,241		6,241	
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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
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		Basic Research		37,023		37,023	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	161,151		161,151	U
		Applied Research		161,151		161,151	
26	0603134BR	Counter Improvised-Threat Simulation	03		13,648	13,648	U
27	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	299,858		299,858	U
		Advanced Technology Development		299,858	13,648	313,506	
94	0604134BR	Counter Improvised-Threat Demonstration, Prototype Development, and Testing	04	12,993	242,668	255,661	U
		Advanced Component Development And Prototypes		12,993	242,668	255,661	
122	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	6,163		6,163	U
		System Development And Demonstration		6,163		6,163	
153	0605502BR	Small Business Innovation Research Management Support	06				U
Total Defense Threat Reduction Agency				517,188	256,316	773,504	

R-119PB: FY 2019 President's Budget (Published Version), as of January 25, 2018 at 08:21:17

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Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
1	01	0601000BR	*DTRA Basic Research.....	Volume 5 - 639

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
20	02	0602718BR	*Counter Weapons of Mass Destruction Applied Research.....	Volume 5 - 645

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
26	03	0603134BR	Counter Improvised-Threat Simulation.....	Volume 5 - 671
27	03	0603160BR	*Counter Weapons of Mass Destruction Advanced Technology Development.....	Volume 5 - 675

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
94	04	0604134BR	Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing.....	Volume 5 - 701

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
122	05	0605000BR	*Counter Weapons of Mass Destruction Systems Development.....	Volume 5 - 727

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
153	06	0605502BR	Small Business Innovation Research.....	Volume 5 - 737

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Defense Threat Reduction Agency • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

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*Counter Weapons of Mass Destruction Advanced Technology Development	0603160BR	27	03.....	Volume 5 - 675
*Counter Weapons of Mass Destruction Applied Research	0602718BR	20	02.....	Volume 5 - 645
*Counter Weapons of Mass Destruction Systems Development	0605000BR	122	05.....	Volume 5 - 727
*DTRA Basic Research	0601000BR	1	01.....	Volume 5 - 639
Counter Improvised-Threat Simulation	0603134BR	26	03.....	Volume 5 - 671
Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	0604134BR	94	04.....	Volume 5 - 701
Small Business Innovation Research	0605502BR	153	06.....	Volume 5 - 737

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ACRONYMS

AA-HPRT	Analytics Hard Problem Research Team
ACES	Arms Control Enterprise System
AD	Agent Defeat
ADMB	Agent Defeat Modeling and Simulation Baseline
AEHF	Advanced Extremely High Frequency
AFX	Air Force Explosive
AI	Active Interrogation
ANTS	Attack the Network Tool Suite
AOR	Area of Responsibility
ARAT	Adversarial Route Analysis Tool
ARIEL	Autonomous Reconnaissance Infrared Electro-optical Loitering
ASIC	Application Specific Integrated Circuit
ATAC	Advanced Targeting Assessment Capability
ATAK	Android Tactical Assault Kit
ATD	Advanced Technology Development
AUV	Autonomous Underwater Vehicle
AWE	Atomic Weapons Establishment
BAA	Broad Agency Announcement
BDA	Battle Damage Assessment
BDI	Battle Damage Information
BICES	Battlefield Information Collection and Exploitation System
BLADE	BDI Link Advanced Demonstrator
BLU	Bomb, Live Unit
C4I	Command, Control, Communications, Computers, and Intelligence
CANES	Consolidated Afloat Network and Enterprise Services

CAPE	Cost Assessment and Program Evaluation
CARDS	CBRN Air-droppable Remotely Deployed Sensor System Cost Analysis Tool for Test Site
C-B	Chemical-Biological
CBP	Customs and Border Protection
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-yield Explosives
CCDR	Combatant Commander
CFD	Computational Fluid Dynamics
CHAMP	Counter Electronics High Power Microwave Advanced Missile Project
CJCS	Chairman, Joint Chiefs of Staff
CNDSP	Computer Network Defense Service Provider
CMOS	Complementary metal-oxide semiconductor
CCMD	Combatant Command
COE	Consequence of Execution
CoE-NI	Consequence of Execution – Nuclear Integration
COI	Community of Interest
CONOPS	Concept of Operations
CONUS	Continental United States
COOP	Continuity of Operations
COP	Common Operating Picture
CP	Counter-proliferation
CPGS	Conventional Prompt Global Strike
C-sUAS	Counter-Small Unmanned Aerial Systems
CSM	Computational Structure Mechanics
CTBT	Comprehensive Nuclear Test Ban Treaty
CT/CP	Counterterrorism / Counterproliferation
CTS	Component Test Structure
CTTS	CBRNE Tactical Training System
C-UAS	Counter- Unmanned Aerial System

C-WAC	Counter-WMD Analysis Center
CWMD	Countering Weapons of Mass Destruction
CWMD-T	Combating Weapons of Mass Destruction –Terrorism
DAPSS	Denied Area Persistent Sensor System
DEL	DTRA Experimentation Lab
DHS	Department of Homeland Security
DIAMONDS	Defense Integration and Management of Nuclear Data Services
DIOCC/DIA	Defense Intelligence Operations Coordination Center/Defense Intelligence Agency
DITEC	DTRA Integration Technical Experimentation Center
DoD	Department of Defense
DO	DISCREET OCULUS
DOE	Department of Energy
DOJ	Department of Justice
DPG	Dugway Proving Ground
DPPG	Defense Policy and Planning Guidance
DRDC	Defence Research and Development Canada
DSCS	Defense Satellite Communications System
DTRA	Defense Threat Reduction Agency
DT&E	Development, Test, and Evaluation
ECBC	Edgewood Chemical Biological Center
EDTC	Engineering and Development Test Center
EM-1	Capabilities of Nuclear Weapons: Effects Manual Number 1
EMP	Electromagnetic Pulse
EMREP	Electromagnetic Reliability and Effects Predictions
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
FEFLO	Finite Element Flow Solver
FFRDC	Federally Funded Research and Development Center

FinFets	Fin-Shaped Field Effect Transistors
FITS	Forensics Inversion Tool Suite
FOC	Full Operational Capability
FREAK	Force-on-Force Evaluation and Analysis of Key Performance Parameters
FYDP	Future Years Defense Program
GCC	Global Command and Control
GEF	Guidance for Employment of the Force
GKMC	Global Knowledge Management System
GSA	Global Situational Awareness
GSM	Global System for Mobile Communications
GUI	Graphical User Interface
HAMMER	Heated and Mobile Munitions Employing Rockets
HANE	High Altitude Nuclear Environments
HARP	High Altitude Radiological Phenomenology
HDBT	Hard and Deeply Buried Target
HEBX	Hybridized Enhanced Blast Explosive
HEMP	High Altitude Electro Magnetic Pulse
HENRE	Health Effects from Radiological and Nuclear Environments
HPAC	Hazard Prediction and Assessment Capability
HPC	High Performance Computing
HPCMP	High Performance Computing Modernization Program
HTD	Hard Target Defeat
IBRD	Interagency Biological Restoration Demonstration
ICEPIC	Improved Concurrent Electromagnetic Particle-in-Cell
IED	Improvised Explosive Device
IMAAC	Interagency Modeling and Atmospheric Assessment Center
IMEA	Integrated Munitions Effects Assessment
IMS	International Monitoring System

IOC	Initial Operational Capability
IPODS	Integrated Precision Ordnance Delivery System
ISIS	Integrated Stand-off Inspection System
ISR	Intelligence, Surveillance, Reconnaissance
ISS	Integrated Sensor System
IR	Infrared
IT	Information Technology
ITD	Integrated Technology Demonstration
IWMDT	Integrated Weapons of Mass Destruction Toolset
JAIEG	Joint Atomic Information Exchange Group
JCAM	Joint Collaborative Analysis Model
JCDE	Joint Concept Development & Experimentation
JCIDS	Joint Capabilities Integration and Development System
JCTD	Joint Concept Technology Demonstration
JDAM	Joint Direct Attack Munition
JEM	Joint Effects Model
JMEWS	Joint Multi-Effects Warhead System
JSAF	Joint Semi-Automated Forces
JWICS	Joint Worldwide Intelligence Communications System
KAFB	Kirtland Air Force Base
keV	kilo-electronvolt
LAMP	Loop-mediated isothermal Amplification
LCP	Large Caliber Penetrator
LLE	Laboratory for Laser Energetics
LLNL	Lawrence Livermore National Laboratory
LTS	Large Test Structure
MACS	Modular Autonomous Countering WMD System
MAGICS	Modular Airborne Gaseous Isotope Collection System

MASS	MILSATCOM Atmospheric Scintillation Simulator
MCNP	Monte Carlo N-Particle
MDA	Missile Defense Agency
NLAN	Non-Classified Local Area Network
OIR	Operation Inherent Resolve (Iraq)
RS	Resolute Support (Afghanistan)
sUAS	Small Unmanned Aerial Systems
SSE	Sensitive Site Exploitation
TWAC	Targeting and Weaponering Analysis Cell
TXL	Transportable Xenon Laboratory
UAS	Unmanned Aerial Systems
UCP	Unified Command Plan
UGF	Underground Facility
UGT	Underground Test
UHPC	Ultra-High Performance Concrete
UK	United Kingdom
USANCA	U.S. Army Nuclear and Combating WMD Agency
USEUCOM	U.S. European Command
USFK	U.S. Forces Korea
USG	United States Government
USPACOM	U.S. Pacific Command
USPDS	U.S. Prompt Diagnostics System
UTAS	Underground Targeting and Analysis System
VAPO	Vulnerability Assessment Protection Option
VEO	Violent Extremist Organization
VIRTUS	Virtual Radiation Training through Ubiety System
VMS	Virtual Management System
VOIP	Voice Over Internet Protocol

WACS	WMD Aerial Collection System
WCF	West Coast Facility
WEP	Weapon Effects Phenomenology
WESC	Weapon Effects Steering Committee
WMD	Weapons of Mass Destruction
WSMR	White Sands Missile Range

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 1: Basic Research</i>	PE 0601000BR / *DTRA Basic Research											
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	254.315	34.623	37.201	37.023	-	37.023	37.229	38.265	39.290	40.117	Continuing	Continuing
RU: <i>Basic Research for Countering WMD</i>	254.315	34.623	37.201	37.023	-	37.023	37.229	38.265	39.290	40.117	Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Threat Reduction Agency (DTRA) Basic Research funds support research across physical, material, engineering, computational, and life sciences directed toward increased knowledge and understanding of the fundamental aspects of observable phenomena associated with the threats posed by weapons of mass destruction (WMD).

DTRA's Basic Research effort is the Nation's only basic research portfolio solely dedicated to countering weapons of mass destruction (CWMD). It provides for the discovery and development of basic knowledge by research performers from academia and world-class research institutions in government and industry. This investment helps motivate the scientific community to conduct research benefiting WMD-related defense missions, advancing the body of CWMD knowledge, and improving knowledge of research efforts that support nonproliferation, counter proliferation, and consequence management. These efforts are closely coordinated with DTRA's Chemical and Biological Technologies Department, which executes a basic research portfolio under DoD's Chemical and Biological Defense Program.

Each year, program and technical managers conduct formal assessments of the portfolio, leveraging deep Science and Technology (S&T) expertise within DTRA, as well as from the Defense Basic Research Advisory Group, independent external panel reviews, and other CWMD-focused stakeholders. This coordination facilitates unique, CWMD-relevant basic research while eliminating unintended duplication of effort in the broader defense S&T community.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	35.436	37.201	37.340	-	37.340
Current President's Budget	34.623	37.201	37.023	-	37.023
Total Adjustments	-0.813	0.000	-0.317	-	-0.317
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.813	-			
• Economic Assumptions	-	-	-0.317	-	-0.317

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency Date: February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 1: Basic Research	PE 0601000BR / *DTRA Basic Research

Change Summary Explanation

The decrease in FY 2019 is due to the impact of lower economic assumptions for inflation. The funding level in this program element continues to reflect the impact of incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 1					R-1 Program Element (Number/Name) PE 0601000BR / *DTRA Basic Research				Project (Number/Name) RU / Basic Research for Countering WMD			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RU: <i>Basic Research for Countering WMD</i>	254.315	34.623	37.201	37.023	-	37.023	37.229	38.265	39.290	40.117	Continuing	Continuing

Note

Prior year funds are related to this project in program element 0602718BR.

A. Mission Description and Budget Item Justification

The Basic Research for Countering WMD project, as the nation's only basic research portfolio solely dedicated to countering weapons of mass destruction (CWMD), is a core strategic investor in future scientific and technological progress across the full spectrum of the Defense Threat Reduction Agency's (DTRA's) CWMD mission areas. This project concentrates on high risk, high-payoff basic research, leveraging world-class expertise in academia, government, and industry, to increase the foundational body of scientific knowledge supporting DTRA's Applied Research and Advanced Technology Development projects.

This project aligns with DTRA's strategic objectives that support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community. The portfolio addresses this guidance through capability enhancements, projects, and Science and Technology (S&T) investments that support CWMD and reduce global nuclear dangers. Specifically, they include: accelerating the development of standoff radiological/nuclear detection capabilities; researching countermeasures and defenses to non-traditional agents; enhancing nuclear forensics; securing vulnerable materials; developing new verification technologies; developing an in-depth understanding of the capabilities, values, intent, and decision making of potential adversaries, whether they are states, networks, or individuals; defeating WMD agents; researching biologically-based and inspired materials for DoD applications; and leveraging science, technology, and innovation through domestic and international partnerships and agreements.

This project solicits, coordinates, and conducts research to build a robust, forward-looking fundamental research portfolio targeting strategic, mission-focused, basic research with high potential impact for CWMD. The research projects are selected for scientific merit, technical quality, and the potential for innovation. Each individual research project offers opportunities to expand the knowledge base to help the warfighter, to bring to bear new science solutions with a fresh approach, or to leverage revolutionary approaches to technical surprise, building a foundation for future CWMD solutions. This research will enable new capabilities to: better understand the environment, threats and vulnerabilities; control, defeat, disable, and/or dispose of WMD threats; and safeguard the force by managing consequences. Each program manager's portfolio leverages a wide range of scientific disciplines, including physics, chemistry, biology, mathematics, information and network sciences and focuses basic research on the CWMD mission.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Project RU: Basic Research for Countering WMD	34.623	37.201	37.023
Description: Project RU funds the exploration and discovery of fundamental scientific knowledge related to DTRA's CWMD mission by research performers from academia, government, and industry.			
FY 2018 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 1	R-1 Program Element (Number/Name) PE 0601000BR / *DTRA Basic Research	Project (Number/Name) RU / Basic Research for Countering WMD
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>- Shape and oversee the CWMD Basic Research portfolio, comprised of approximately 150 active basic research awards on a three to five year cycle. This portfolio continues to address the DoD priority on CWMD science and technology, and supports specific priorities on Autonomy, Data-driven Decisions, Electronic Protection, System Resiliency and other emerging areas of interest.</p> <p>- Support world-class talent in WMD research at universities and laboratories to bolster the development of the future Science, Technology, Engineering, and Mathematics workforce.</p> <p>- Assess entire CWMD Basic Research portfolio on an annual basis.</p> <p>- Assure progress toward technical objectives and support collaborative relationships within the scientific community through an annual technical review of each grant to assess scientific advancement.</p> <p>- Assess the focus and scope of the program related to CWMD challenges and assess the coordination of CWMD basic research across the DoD mission space and the broader basic research community to avoid duplication and ensure successful partnerships via an External Panel Review.</p> <p><i>FY 2019 Plans:</i></p> <p>- Manage and steer the CWMD Basic Research portfolio, comprised of approximately 150 active basic research awards on three-to five-year cycles. This portfolio continues to address DoD CWMD science and technology requirements, supporting specific priorities focused on current and emerging areas of interest.</p> <p>- Support collaborative relationships within the scientific community and ensure progress toward technical objectives through an annual technical review of each grant to assess scientific advancement.</p> <p>- Support the development of world-class talent in WMD research at universities and laboratories to foster the future Science, Technology, Engineering, and Mathematics workforce.</p> <p>- Conduct an Internal Portfolio Review to assess the focus and scope of the portfolio related to CWMD challenges and assess the coordination of CWMD basic research across the DoD mission space and the broader basic research community to avoid duplication and ensure successful partnerships.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> No significant change.</p>			
Accomplishments/Planned Programs Subtotals	34.623	37.201	37.023

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks
*Prior year funds are related to this project in program element 0602718BR.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 1	PE 0601000BR / <i>*DTRA Basic Research</i>	RU / <i>Basic Research for Countering WMD</i>

D. Acquisition Strategy

Procurement methods include competitive selection awards through DTRA's Broad Agency Announcement and collaborative funding through other organizations.

E. Performance Metrics

Project performance is measured via a combination of statistics including the number of publications generated, number of students trained in sciences and engineering supporting DoD educational goals, number of participating research organizations, and percentage of awards transitioned to other programs for further development.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 0602718BR I <i>*Counter Weapons of Mass Destruction Applied Research</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	959.906	151.028	157.908	161.151	-	161.151	163.576	165.678	165.879	170.045	Continuing	Continuing
RA: <i>Information Sciences and Applications</i>	189.420	35.048	30.270	31.830	-	31.830	29.977	30.167	30.412	31.270	Continuing	Continuing
RD: <i>Detection Technologies</i>	15.083	14.570	14.769	16.860	-	16.860	18.287	17.520	17.875	18.249	Continuing	Continuing
RE: <i>Counter-Terrorism Technologies</i>	8.472	0.099	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
RF: <i>Forensics Technologies</i>	207.133	9.176	10.274	10.257	-	10.257	10.466	10.675	10.894	11.123	Continuing	Continuing
RG: <i>Defeat Technologies</i>	86.028	10.428	11.060	12.959	-	12.959	13.262	13.222	13.436	13.634	Continuing	Continuing
RI: <i>Nuclear Survivability</i>	129.182	30.085	34.103	32.732	-	32.732	33.723	34.479	32.915	33.841	Continuing	Continuing
RL: <i>Nuclear & Radiological Effects</i>	158.822	26.419	29.228	29.388	-	29.388	30.054	30.723	31.413	32.072	Continuing	Continuing
RM: <i>WMD Counterforce Technologies</i>	92.653	11.702	14.552	12.780	-	12.780	12.991	13.736	13.483	14.081	Continuing	Continuing
RR: <i>Countering WMD Test and Evaluation</i>	73.113	13.501	13.652	14.345	-	14.345	14.816	15.156	15.451	15.775	Continuing	Continuing

Note
 *Program Element 0602718BR name changes from WMD Defeat Technologies to Counter Weapons of Mass Destruction Applied Research beginning in FY 2018.
 **Project RR title changed from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification
 The Defense Threat Reduction Agency (DTRA) Counter Weapons of Mass Destruction (WMD) Applied Research program element funds the expansion and application of basic scientific knowledge in order to develop novel materials, devices, systems, and methods supporting next generation concepts and technologies that enable advances in WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and treaty verification.

This Applied Research portfolio is aligned with strategic planning objectives and Science and Technology (S&T) investment direction established annually by DTRA. The objectives directly support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>
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The portfolio advances DTRA's Countering WMD (CWMD) mission by balancing the following imperatives: invest in DTRA's applied research capabilities and increase the CWMD technology base to maximize future pay-off; capitalize on opportunities to deliver innovative, cost-effective solutions to technical challenges that must be resolved prior to system-specific technology investigations and development; and ensure applied research efforts are directly aligned to mission-specific capability requirements of DTRA, the Military Departments, Combatant Commanders, other DoD and federal agencies, and international partners.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	154.857	157.908	160.417	-	160.417
Current President's Budget	151.028	157.908	161.151	-	161.151
Total Adjustments	-3.829	0.000	0.734	-	0.734
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.506	-			
• FFRDC	-0.323	-	-	-	-
• Realignments	-	-	-1.960	-	-1.960
• Programmatic Increase	-	-	4.000	-	4.000
• Economic Assumptions	-	-	-1.306	-	-1.306

Change Summary Explanation

The increase in FY 2019 is due to the net effect of increased investment to counter Improvised Explosive Device/small Unmanned Aerial Systems (IED/sUAS) (i.e., Tier 1 and 2 UAS, including rotary and fixed winged), a realignment of funding to program element 0603160BR for CWMD terrorism support, a realignment to DTRA's Operations and Maintenance portfolio in support of the Defense Threat Reduction Analysis Center (DTRIAC), and lower economic assumptions for inflation. The funding level in this program element continues to reflect the impact of incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RA / Information Sciences and Applications			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RA: <i>Information Sciences and Applications</i>	189.420	35.048	30.270	31.830	-	31.830	29.977	30.167	30.412	31.270	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Information Sciences and Applications project develops concepts and technologies in the areas of high-speed information processing, modeling and simulation, signal detection, and data-driven decision analysis in support of the Defense Threat Reduction Agency's (DTRA's) technical reachback teams. This project develops and maintains continuously improving collaborative architectures and Chemical, Biological, Radiological, Nuclear and High-yield Explosives (CBRNE) modeling and simulation codes that drive an integrated suite of decision support tools serving the Combatant Commands, other Department of Defense (DoD) agencies, and national and international Countering Weapons of Mass Destruction (CWMD) partners. This effort funds research activities that benefit the public through analysis and engagement to reduce and counter the threats posed by WMD/Weapons of Mass Effects (WME) via the Project on Advanced Systems and Concepts for Countering WMD (PASCC). PASCC cultivates national and international research community partnerships across domains, brings scientific, technical, and social science faculty/experts together, and looks ahead to help understand and anticipate WMD/WME capabilities and threats.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RA: Information Sciences and Applications	35.048	30.270	31.830
Description: Project RA develops concepts and technologies in the areas of high speed information processing, modeling and simulation, signal detection, and data-driven decision analysis.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Continue to pursue methodologies and explore capabilities for enabling data collection, toolset automation, and distributed analysis / synthesis of emerging and disruptive technology information that supports the Technology-Driven WMD Threat Forecasting program. - Continue to develop data anomaly detection and analysis technology as part of DoD Distributed Common Ground/Surface System and Intelligence Community Information Technology Enterprise-compliant architectures. - Continue to develop enhancements to modeling, simulation, and data architecture capabilities for analysis of higher order effects from nuclear detonation, to include physical infrastructure, political, and economic impacts. - Continue maturation of DTRA Experimental Laboratory capabilities in support of whole-of-government CWMD research and development mission areas. - Enhance the software stack to include a minimum of two new nuclear effects phenomenology code capabilities in support of the Mission Planning Analysis System (MPAS) allowing the use of the user interface and web services to acquire effects assessments within the U.S. Strategic Command (USSTRATCOM) operational environment. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RA / Information Sciences and Applications

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>-Initial integration and deployment of two new nuclear effect phenomenology codes for fire spread and electro-magnetic pulse (EMP) modeling within the Integrated Weapons of Mass Destruction Toolset (IWMDT) architecture to support the MPAS at US USSTRATCOM by providing prototype orchestrated effects modeling for combined effects.</p> <p>- Continue to develop high fidelity Force-on-Force (phenomenology and effects) computational modeling and simulation capabilities integrated with real and virtual sensor responses.</p> <p>- Continue to conduct a large-scale test series interagency on dense gas release and to develop enhancement of models to improve atmospheric hazard predictions; improvement of models reduces uncertainty of analyses used by staff planners and first responders. Develop enhancements and modifications to codes supporting analysis of test results.</p> <p>- Complete development of environmental degradation parameters of airborne non-traditional chemical agents to characterize collateral effects after a strike on a WMD facility; improvement of models reduces uncertainty in collateral effects from WMD in support of combat operations.</p> <p>- Continue to develop and integrate a CWMD sensor framework in collaboration with the Night Vision Laboratory and Common CBRN Sensor Interface sponsors (DTRA's Nuclear Technologies and Counterterrorism Technologies Divisions and the Joint Program Executive Office for Chemical and Biological Defense) to enable real-time data fusion of deployed sensors with modeling and simulation tools.</p> <p>- Continue to develop and enhance high fidelity radiation detection training applications for use in mobile devices.</p> <p>- Continue to develop augmented reality displays for mobile devices to enable training with virtual radiation source surrogates.</p> <p>- Continue to develop automated methods to consolidate multiple geospatial terrain types into a single virtual globe capable of supporting multiple modeling and simulation platforms.</p> <p>- Continue to develop mobile device-based route planning, force tracking, sensor integration, and geo-tagging applications to support warfighter- unique CWMD missions.</p> <p>- Continue to conduct a series of WMD studies via the Project on Advanced Systems and Concepts for Countering WMD (PASCC) and grant 20 to 25 research awards that support CWMD efforts.</p> <p>FY 2019 Plans:</p> <p>- Release software update for Force-on-Force Evaluation and Analysis of Key Performance Parameters (FREAK), which provides Integrated Force-on-Force Models for Course of Action Analysis, CONOPS Development, and Sensor Performance Prediction.</p> <p>- Release software update for Virtual Radiation Training through Ubiety System (VIRTUS), which provides a mobile phone based radiation sensor emulator for search training.</p> <p>- Release software update for Android Tactical Assault Kit (ATAK), which incorporates CWMD capabilities into a mobile phone based tactical common operating picture - for customers to support new, emerging and updated modeling and simulation requirements.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RA / Information Sciences and Applications

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to sustain a shared, rapidly configurable computational environment to serve as the common R&D backbone: core analytic tools, shared information, and applications. Provide analytic solutions and shared computations environments to support R&D and operational needs. - Transition analytic investments, including machine learning, natural language processing, and statistical analytics technologies to the common R&D backbone for agency wide access. - Improve decision making processes and time-to-decision cycles by researching, developing, integrating, deploying, and managing advanced data analytics, data visualizations, and knowledge management capabilities to support DTRA's and associated mission partners'/customers' validated operational capability requirements. - Establish and advise on approaches to leverage cloud-based capabilities to improve data access, interoperability, and policy compliance. Implement and enforce system designs to support compliance with DoD cybersecurity policies. - Further develop and implement a sustainable and scalable analytic capability to discover emerging and disruptive technologies in support of efforts to anticipate and meet new and emerging requirements. - Continue PASC and grant 20 to 25 research awards that support CWMD efforts. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to a revised acquisition strategy for cloud services and the realignment of High Performance Computing activities.</p>			
Accomplishments/Planned Programs Subtotals	35.048	30.270	31.830

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	18.102	10.229	11.286	-	11.286	11.480	11.752	12.005	12.258	Continuing	Continuing
• 153/0605502BR: Small Business Innovation Research	10.456	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RA / <i>Information Sciences and Applications</i>

E. Performance Metrics

Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RD / Detection Technologies			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RD: <i>Detection Technologies</i>	15.083	14.570	14.769	16.860	-	16.860	18.287	17.520	17.875	18.249	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Detection Technologies mission is to conduct Research, Development, Test, & Evaluation to (1) identify, develop, and exploit signatures associated with nuclear threats to advance U.S. capabilities to detect and interdict such threats; and (2) locate, identify, and track special nuclear material and improve detection factors such as range, time, sensitivity, and accuracy to enhance Service and Special Mission Unit capabilities. These efforts support Department of Defense (DoD) requirements for countering terrorism, counter/nonproliferation, countering rogue states, and homeland defense.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RD: Detection Technologies	14.570	14.769	16.860
Description: Project RD develops direct and indirect technologies for the detection of radiation and non-radiative signatures associated with nuclear threats, and advances warfighter capabilities to rapidly locate, characterize, and counter such threats.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Continue to develop radiation and nuclear threat detection systems to identify the best performing technologies and techniques for transition to advanced technology development efforts. - Continue to develop technologies for next generation nuclear imaging devices with dual gamma and neutron imaging capability, enabling warfighters to rapidly pinpoint and identify detected radioisotopes. - Continue to develop technologies to enable interoperable architectures for enhanced, real-time mission analysis and user-defined operational pictures within a shared or distributed area of operations. - Continue to develop and integrate novel detection materials and advanced helium-3 replacement technologies into prototype radiation detection systems to increase range, sensitivity, and accuracy of detection and enable warfighters to rapidly locate targeted material. - Continue to develop, integrate, and demonstrate prototype radiation and nuclear threat detection algorithms, electronics and communications capabilities to enhance the range of detectability of targeted material. - Initiate investigation of computer learning and computer vision technologies to enhance nuclear threat situational awareness and nuclear threat identification. - Initiate investigation of various sensor capabilities for far-field identification and tracking of nuclear threats. - Identify exploitable observables to inform technology development and investigate emerging technologies that indicate the presence of nuclear threats. 			
FY 2019 Plans:			
<ul style="list-style-type: none"> - Develop a contamination avoidance capability. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RD / Detection Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Develop wearable neutron detectors made of Boron-Coated Straw in support of the development of modern, novel detector solutions to revolutionize CONOPs. - Develop detailed studies to systematically identify new nuclear threat signatures, breaking down the problem geographically to distinguish between allies and foes, and to determine assets and coverage. - Transition those technologies that demonstrate exceptional capabilities in radiation and nuclear threat detection to advanced technology development. - Develop tools for pre-detonation diagnostics, leveraging high spatial resolution nuclear imagers, multiplicity algorithms, trace analysis tools, and high-fidelity test objects to increase capability to characterize threats. <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to additional investment in radiation detection and nuclear threats detection, intelligence, surveillance, and reconnaissance to support technology development efforts for greater effectiveness of general purpose forces in a nuclear environment.</p>			
Accomplishments/Planned Programs Subtotals	14.570	14.769	16.860

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	16.608	17.556	26.021	-	26.021	27.110	28.170	28.867	29.472	Continuing	Continuing

Remarks

D. Acquisition Strategy
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across the Department of Defense and other government agency laboratories, academia, industry and international partner organizations.

E. Performance Metrics
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RE / Counter-Terrorism Technologies			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RE: <i>Counter-Terrorism Technologies</i>	8.472	0.099	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Counter-Terrorism Technologies project is an over-arching project that develops and transitions a full spectrum of new technologies to counter emergent Weapons of Mass Destruction (WMD) thus enabling warfighters to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, nuclear production, storage, and weaponization facilities.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RE: Counter-Terrorism Technologies	FY 2017	FY 2018	FY 2019
Description: Project RE provides research and development (R&D) support to Joint U.S. Military Forces, specifically U.S. Special Operations Command (USSOCOM), in the areas of Explosive Ordnance Disposal Device Defeat; Counter WMD technologies for warfighters; the USSOCOM Countering WMD – Terrorism Support program.	0.099	-	-
Accomplishments/Planned Programs Subtotals	0.099	-	-

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 27/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	98.532	103.869	108.978	-	108.978	111.060	113.426	115.596	118.024	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Number of technologies developed and delivered, and/or proof of concept, or successful Military Utility Assessments conducted that increase the potential mission success and reduce the number of current gaps in Special Operations Forces capabilities to counter weapons of mass destruction.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RF / Forensics Technologies			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RF: <i>Forensics Technologies</i>	207.133	9.176	10.274	10.257	-	10.257	10.466	10.675	10.894	11.123	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Forensics Technologies project develops post-detonation nuclear forensics technologies providing accurate, rapid, and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts. These forensics technologies also enable the Defense Threat Reduction Agency (DTRA) and its trusted partners to detect, locate, identify, track, and interdict nuclear and radiological threats, including weapons and material and enablers to their acquisition and development. In accordance with Department of Defense Directive S-2060.04, DTRA serves as the U.S. Government lead for post-detonation National Technical Nuclear Forensics (NTNF) research and development (R&D). As the central NTNF R&D coordinator, DTRA works in consultation with interagency partners to develop and improve ground-based capabilities supporting exploitation and attribution missions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RF: Forensics Technologies	9.176	10.274	10.257
Description: Project RF develops post-detonation nuclear forensics technologies providing accurate, rapid and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts.			
FY 2018 Plans:			
- Develop and evaluate new and improved prompt diagnostics, debris collection, analysis and diagnostics, and device modeling concepts and methodologies to support nuclear device reconstruction and decrease timelines for, lower uncertainty of, and increase confidence in technical nuclear forensics conclusions supporting attribution.			
- Engage with partner nations under appropriate international agreements to improve understanding of prompt phenomenology, modeling tools, and sensor technologies.			
- Develop and improve techniques and algorithms to analyze, combine, and integrate speed-of-light and speed-of-sound phenomena in an urban environment to increase the effectiveness and accuracy of nuclear detonation yield determinations and weapon characterizations.			
- Investigate and evaluate innovative ground-based prompt diagnostic sensor concepts and technologies, such as ubiquitous networks and sensors with reduced size, weight, and power consumption, to improve sensor portability and expand operational capability and flexibility.			
- Expand international collaboration in the areas of experiments and weapons modeling to improve device reconstruction tools and analysis.			
- Develop and evaluate new and improved validation and verification technologies and methodologies, such as surrogate debris and representative isotopes, to support post-detonation National Technical Nuclear Forensics laboratory analysis and decrease timelines, lower uncertainties, and increase confidence in technical nuclear forensics conclusions supporting attribution.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RF / Forensics Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
- Investigate and develop novel concepts enabling radical reductions in the time required to conduct ground fallout debris collections, conduct analyses in the field, and obtain nuclear forensic results. FY 2019 Plans: - Reduce the fixed lab process timeline by 50%, increasing confidence and decreasing technical uncertainties in the materials forensics results. This will be accomplished through expanded interpretability of test results, improvement in quality of ground samples, including complex debris from transient environments, and optimization of current debris analysis constructs. - Evaluate and extract relevant data from historic nuclear tests to help calibrate codes to support device characterization improvements. - Expand signature databases with appropriate information on generic designs, known weapon designs, and known effects. - Increase capability development efforts in ubiquitous networks and airborne platforms to support prompt diagnostics and forensics technology improvements. - Conduct/lead a DoD and interagency end-to-end nuclear forensics process technology demonstration and evaluation of DTRA-developed technologies/methodologies to assess NTNF process improvements. - Identify potential development of a new advanced capability in forensic conclusion confidence, timeliness, and accuracy, and assist in assessing contribution to interagency attribution process and decisions. FY 2018 to FY 2019 Increase/Decrease Statement: No significant change.			
Accomplishments/Planned Programs Subtotals	9.176	10.274	10.257

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	36.738	40.286	33.578	-	33.578	32.973	33.668	34.371	35.094	Continuing	Continuing
• 122/0605000BR: Counter Weapons of Mass Destruction Systems Development	4.479	6.241	6.163	-	6.163	4.821	5.340	5.602	5.720	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RF / <i>Forensics Technologies</i>

D. Acquisition Strategy

Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of Counter WMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RG / Defeat Technologies			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RG: Defeat Technologies	86.028	10.428	11.060	12.959	-	12.959	13.262	13.222	13.436	13.634	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defeat Technologies project develops innovative kinetic and non-kinetic weapon technologies to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat adversarial use of Weapons of Mass Destruction (WMD) while minimizing collateral effects. Technology development focuses on the physical or functional defeat of WMD threat materials, an adversary's ability to deliver the same, and the physical and nonphysical support networks enabling both. It does so through the systematic identification and maturation of technologies capable of defeating WMD agents or agent-based processes and selecting technologies for integration into weapons, delivery systems, or rapid WMD elimination capabilities. This effort includes developing specific WMD agent/agent-based process simulants, sub-scale test infrastructure, and sampling capability required for effective development, testing, and evaluation of next-generation Countering WMD (CWMD) capabilities. The project places a high priority on understanding, characterizing, and validating potential weapon effects within mathematical confidence as it relates to the unintended release of hazardous threat materials. Technologies with the potential for weapon and capability integration are transitioned to the advanced technology development effort under this project. On a limited basis, technology test data is shared with coalition partners.

DTRA's Counter - Improvised Explosive Device / Counter- small Unmanned Aerial Systems (C-IED/C-sUAS) mission includes three primary lines of effort - attack the supporting threat network, protecting US forces, and building partner capacity. Since DTRA already provides this support in helping the Department counter IEDs for the US joint force, it follows that DTRA is the most-appropriate Department asset to undertake this C-sUAS coordination mission - to provide counter threat network support to deployed forces, C-IED/C-sUAS technology solutions, C-IED/C-sUAS training support (deploying and deployed US joint forces), and building partner nation capacity all while coordinating the overall Department's (C-IED/C-sUAS) efforts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RG: Defeat Technologies	10.428	11.060	12.959
Description: Project RG develops innovative kinetic and non-kinetic weapon technologies to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat adversarial use of WMD while minimizing collateral effects.			
FY 2018 Plans:			
- Continue static demonstrations of access denial and denial-of-use technologies against representative WMD threats.			
- Conduct scaled demonstrations of access denial and denial-of-use technologies against representative WMD threats.			
- Continue sub-scale tests of new standoff weapon payloads to defeat chemical and biological warfare targets.			
- Continue sub-scale tests of emergent technologies to accurately measure WMD simulant released in a plume.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RG / Defeat Technologies
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Conduct an incremental capability demonstration for an autonomous systems technology update to the Modular Autonomous Counter-WMD System B (MACS-B). - Develop future MACS advanced holistic payloads, refining the concept and conducting technology investigation. - Develop Combined Effects Payload for Access Denial (CEPAD) payload. - Collect signatures on threat-improvised rotary winged and fixed winged IED/sUAS in a lab and field environment. - Provide infrastructure to collect signatures including sensors, lab, and field equipment, collection software and collection tools. - Provide a consolidated C-IED/C-sUAS library including database(s), database access, and database/library management including entry, creation and vetting of information. Analyze C-IED/C-sUAS equipment data, and create/sustain algorithms, databases and tables to monitor the creation and vetting of information. - Monitor exploitation of rotary winged, fixed winged IED/C-sUAS to manage the capability gap (from a technology and database standpoint). <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to the net effect of the realignment of funds to support experimental activities in Project RM in program element 0603160BR and increased investment to counter IED/C-sUAS.</p>			
Accomplishments/Planned Programs Subtotals	10.428	11.060	12.959

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	18.819	22.161	49.277	-	49.277	24.491	24.108	24.578	25.010	Continuing	Continuing

Remarks

D. Acquisition Strategy
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research					Project (Number/Name) RI / Nuclear Survivability		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RI: <i>Nuclear Survivability</i>	129.182	30.085	34.103	32.732	-	32.732	33.723	34.479	32.915	33.841	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear Survivability project develops innovative technologies for the protection of mission-essential personnel, critical military and national defense capabilities, and associated control and support systems during a nuclear event. Research under this project supports the mission critical systems identified under Department of Defense Instruction 3150.09, Chemical, Biological, Radiological, and Nuclear Survivability Policy. The Defense Threat Reduction Agency is designated by the Department of Defense (DoD) as the center of excellence for electromagnetic pulse (EMP) survivability assessments. The System Vulnerability and Assessment effort develops nuclear assessment capabilities to support operational planning, weapons effects predictions, and strategic system design. This activity also provides the DoD's nuclear design and protection standards for new and existing systems, e.g., command and control facilities and aircraft. Key systems include the Nuclear Command and Control System, the net-centric thin-line, and both military and civilian satellites and associated support systems. The radiation hardened nano-electronics effort develops and demonstrates radiation-hardened, high-performance prototype nano-electronics to meet DoD strategic deterrence system requirements. Experimental Capabilities activities provide the warfighter with unique x-ray, gamma ray, and EMP test capabilities in support of system survivability development, certification, and sustainment. This effort leverages research from and coordinates with the National Nuclear Security Administration (United States) and the Atomic Weapons Establishment (United Kingdom) to develop enabling technologies for improved nuclear weapon effects experimentation capabilities. Nuclear technology analysis efforts support detailed planning related to policy, strategy, objectives, and programmatic integration. These efforts also support international collaboration, user groups, case study reviews, and the Joint Atomic Information Exchange Group. The human survivability effort conducts research to develop and validate mortality and morbidity models associated with radiological and nuclear weapon effects.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RI: Nuclear Survivability	30.085	34.103	32.732
Description: Project RI provides the capability for DoD nuclear forces and their associated control and support systems and facilities to avoid, repel, endure, or withstand attack or other hostile action, to the extent that essential functions can continue or be resumed after the onset of hostile action.			
FY 2018 Plans:			
- Develop nuclear countermeasure and neutron biological effectiveness modeling in DTRA's existing Health Effects from Radiological & Nuclear Environments (HENRE) R&D computer code and, upon validation and verification, update United States Strategic Command (USSTRATCOM) and DTRA operational codes; this modeling will assist DoD and other federal agencies in selecting and supporting specific nuclear countermeasures.			
- Complete development of and implement a methodology for comprehensive analysis of the DoD Chemical, Biological, Radiological, and Nuclear Mission-Critical Reports for nuclear survivability and hardening of Mission-Critical Systems/Equipment per DoDI 3150.09.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency	Date: February 2018
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Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RI / Nuclear Survivability
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to evaluate High Altitude Electromagnetic Pulse (HEMP) threat survivability for Aegis Ashore-Poland and satellite communication ground facilities. - Continue to investigate electromagnetic pulse effects on power grid transformers, as part of a collaborative research effort with the United Kingdom on critical civilian and defense infrastructure. - Continue to provide nuclear scintillation expertise to DoD and Service Program Executive Offices (PEOs) to assist in certification of disturbed channel simulators and new survivable satellite communication systems. - Publish update to MIL-STD-188-125-1, HEMP Protection for Ground-Based Command, Control, Communications, Computers, and Intelligence (C4I) Facilities Performing Critical, Time-Urgent Missions: Part 1 Fixed Facilities and update to MIL-HDBK-423 HEMP Protection for Ground-based, Mission-Critical Facilities Part 1 Fixed Facilities, Part I. - Publish Nuclear Disturbed Communications Environment Annex to the Consolidated Afloat Networks and Enterprise Services Military Standard to assist DoD and Service PEOs. - Complete HEMP Certification recommendation to USSTRATCOM for the Missile Defense Complex, Ft. Greely, AK. - Apply advanced electron beam diagnostics to characterize the PITHON test capability at the DTRA West Coast Facility for strategic reentry systems survivability. - Continue to develop or initiate development of and demonstrate an advanced warm x-ray spectrometer to reduce uncertainties and design margins for code validation and electronics certification. - Demonstrate an advanced Single Wire Radiator array warm x-ray source on Double-EAGLE at the DTRA West Coast Facility for strategic reentry systems survivability. - Demonstrate multi-point x-ray sources at the National Ignition Facility to improve cold x-ray test capabilities for strategic and missile defense systems. - Demonstrate a large-area direct laser impulse test capability at the National Ignition Facility for strategic system survivability certification. - Complete study of satellite solar power array response phenomenologies in pulsed x-ray environments. - Support Missile Defense Agency cold x-ray survivability experiments at the National Ignition Facility. - Continue to develop the 16/14nm Radiation Hardened by Design (RHBD) Library. - Continue development of Complementary e-Beam Lithography (CeBL) technologies to reduce the cost of low volume DoD radiation hardened micro and nano-electronics. - Develop RHBD neutron Single Event Effects mitigation techniques for strategic radiation hardened digital complementary metal-oxide-semiconductor and Analog Mixed Signal Devices. - Complete development of the Satellite System Natural and Nuclear Environment Protection Standard. - Complete exploration of technology-agnostic radiation hardening for Boolean logic and multipliers using the principles of information theory and transition results to the 14nm RHBD program. <p>FY 2019 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RI / Nuclear Survivability

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Align nuclear detonation personnel casualty output from DTRA's Health Effects from Radiological & Nuclear Environments (HENRE) for Hazard Prediction and Assessment Capability (HPAC) to the Defense Health Agency's Joint Medical Planning Tool. - Advance cold/warm x-ray and laser experimentation in order to improve nuclear survivability. For cold x-ray impulse, initiate ion beam and diagnostics development on PITHON, leading to high fluence x-rays for materials and full system impulse capability for Re-entry Vehicles/Re-entry Bodies to improve radiation survivability. Complete debris mitigation system for Double-EAGLE in support of cold x-rays for optics and thermostructural response efforts that support Missile Defense Agency (MDA) and satellite systems requirements - Translate radiation hardening basic mechanisms and physics of failure into engineering solutions to improve device and component hardening and survivability. - Update environment and protection standards on periodic five year intervals and respond to Service and Combatant Command requests for verification assessments, to include conduct of U.S. European Command/ U.S. Pacific Command Operational Plan and mission critical systems analytical assessments. - Continue development of RHBD neutron Single Event Effects mitigation techniques for strategic radiation hardened digital complementary metal-oxide-semiconductor and Analog Mixed Signal Devices. - Develop HEMP, atmospheric, and disturbed environment standards; conduct verification assessments for the Services and MDA; develop technology insertions; and provide subject-matter expert support to provide combat readiness and survivability status to leadership and feedback for Military Standards validity. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease from FY 2018 to FY 2019 is due to reduced investment in radiation hardened Nano-electronics.</p>			
Accomplishments/Planned Programs Subtotals	30.085	34.103	32.732

C. Other Program Funding Summary (\$ in Millions)										
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete Total Cost
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	5.964	6.658	5.783	-	5.783	5.946	6.025	6.156	6.285	Continuing Continuing

Remarks

D. Acquisition Strategy
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across the DoD and other government agency laboratories, academia, industry, and international partner organizations.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RI / <i>Nuclear Survivability</i>

E. Performance Metrics

Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RL / Nuclear & Radiological Effects
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	158.822	26.419	29.228	29.388	-	29.388	30.054	30.723	31.413	32.072	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear and Radiological Effects project develops modeling tools to: support military operational planning, weapons effects predictions, and strategic system design decisions; consolidate validated modeling tools into the Joint Information Environment for integrated functionality; predict system responses to nuclear and radiological weapons producing electromagnetic, thermal, blast, shock, and radiation environments; provide detailed adversary nuclear infrastructure characterization to enhance counterforce operations and hazard effects; and, develop foreign nuclear weapon outputs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RL: Nuclear & Radiological Effects	26.419	29.228	29.388
Description: Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapons effects predictions, and strategic system design decisions.			
FY 2018 Plans:			
- Continue to develop nuclear weapons effects tools and analyses for effective targeting, including methods to evaluate the consequences of execution of a given course of action.			
- Continue to develop enhanced High Altitude Radiation Phenomenology functionality for use on modern computer systems.			
- Continue to develop initial weapon output spectrum extension required by missile defense systems to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment.			
- Continue to develop combined effects methodologies to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment.			
- Continue to develop an authoritative source of foreign and historical nuclear weapon outputs to aid in the development of uniform nuclear survivability standards, hardening technologies, and experimental test capabilities.			
FY 2019 Plans:			
- Develop system-generated electromagnetic pulse follow-on efforts and electromagnetic pulse coupling and response efforts to deliver high-fidelity early-time electromagnetic analysis and operational tools for US and Allied nuclear weapon effects stakeholders.			
- Publish updates to Weapons Output eBooks, delivering high-fidelity nuclear source terms and historical test data for use in, and validation of, modern weapon effects codes.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RL / Nuclear & Radiological Effects
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
- Develop petroleum effects models for Consequences of Execution, linking higher order impacts to Political Military Economic Social Infrastructure Information (PMESII) analyses. <i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> No significant change.			
Accomplishments/Planned Programs Subtotals	26.419	29.228	29.388

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 27/0603000BR: Counter Weapons of Mass Destruction Advanced Technology Development	3.390	3.500	3.427	-	3.427	3.426	3.424	3.424	3.497	Continuing	Continuing

Remarks
*Prior year funds related to this this project in program element number 0605000BR.

D. Acquisition Strategy
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics
Percentage of Counter WMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RM / WMD Counterforce Technologies
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RM: WMD Counterforce Technologies	92.653	11.702	14.552	12.780	-	12.780	12.991	13.736	13.483	14.081	Continuing	Continuing

A. Mission Description and Budget Item Justification

The WMD Counterforce Technologies Project develops Countering Weapons of Mass Destruction (CWMD) weapon effects modeling algorithms, full and sub-scale test series required to investigate CWMD weapon effects and sensor performance, and visualization and situational awareness tools to support the next generation Defense Threat Reduction Agency (DTRA) Technical Reachback cell. These activities are critical enablers for the development of advanced CWMD planning tools and include Advanced Energetics and Advanced Life Sciences. Advanced Energetics develops energetic materials and weapon design technology providing advanced defeat capabilities for engaging hard and deeply buried targets that are well beyond current high explosive blast/fragmentation warhead technology. Advanced Life Sciences research develops technologies to find, locate, mitigate, and defeat WMD using bio-organisms or components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RM: WMD Counterforce Technologies	11.702	14.552	12.780
Description: Project RM provides novel and enhanced weapons energetic materials and structures, full-scale testing of counter WMD weapon effects, weapon effects modeling, weapon delivery optimization, and technical reachback services.			
FY 2018 Plans:			
- Continue to demonstrate upgraded small scale Hybrid Enhanced Blast Explosives for improved agent defeat capability.			
- Deliver agent defeat weapon effects models to include post blast agent release and dispersion from multiple agent release mechanisms, agent mass transport, break-up and phase change, and agent fate for modeling and simulation (M&S) planning tool enhancements.			
- Complete tests to deliver data for updating chemical agent source term models within the Integrated Munitions Effects Assessment (IMEA) and for calibration and validation of Second-order Closure Integrated Puff (SCIPUFF).			
- Complete calculations and mid / large-scale tests, and deliver weapons effects models to include blast and debris environment from embedded detonation, blast dynamic pressure, fragmentation, and blast through blast doors.			
FY 2019 Plans:			
- Transition Hellfire-sized structural reactive material warhead technology and design to the Military services to improve capabilities to hold targets at risk.			
- Advance technical capabilities or methods to detect, locate/track, identify, characterize, monitor, assess, plan and protect against, deter, delay, disrupt, neutralize, or destroy WMD through special innovative research targeted at meeting capability gaps in CWMD.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RM / WMD Counterforce Technologies
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
- Test biocide at larger scale to analyze prompt and persistent effects, improving capability to neutralize or destroy biological weapons or agents. - Develop CWMD weapon effects modeling algorithms and scaled test series leveraging machine learning and optimization for attack planning to investigate CWMD weapon effects, and enhance WMD defeat Modeling and Simulation planning tools. FY 2018 to FY 2019 Increase/Decrease Statement: The decrease from FY 2018 to FY 2019 is due to the realignment of the High Performance Computing (HPC) activity from Project RM to Project RA.			
Accomplishments/Planned Programs Subtotals	11.702	14.552	12.780

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	23.041	24.663	25.243	-	25.243	25.905	26.911	27.520	28.097	Continuing	Continuing

Remarks

D. Acquisition Strategy
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RR / Countering WMD Test and Evaluation
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RR: <i>Countering WMD Test and Evaluation</i>	73.113	13.501	13.652	14.345	-	14.345	14.816	15.156	15.451	15.775	Continuing	Continuing

Note

**Project RR title changed from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Countering WMD Test and Evaluation project provides a unique national test capability for simulated Weapons of Mass Destruction (WMD) facilities and processes. This capability provides structured and systematic end-to-end test event planning, preparation, management, execution, and data analysis. It also offers test instrumentation (data acquisition systems and optics), scientific analysis and predictions, test article construction, test article/test bed remediation, tunnel mining, architectural and engineering design, systems engineering and integration, and test data management. The facility leverages 50 years of expertise in investigating weapons effects and target response across the spectrum of hostile environments that could be created by proliferent nations or terrorist organizations with access to advanced conventional weapons or WMD. Subject matter experts design full and sub-scale testing strategies focusing on weapon-target interaction with fixed soft and hardened facilities to include above ground facilities, cut-and-cover facilities, and deep underground tunnels. This capability does not exist anywhere else within the Department of Defense (DoD) and supports the counterproliferation pillar of the National Strategy to Counter WMD.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RR: Countering WMD Test and Evaluation	FY 2017	FY 2018	FY 2019
<p>Description: Project RR provides a unique national test bed capability for the study of weapon-target interaction, simulated WMD facility characterization, and WMD facility defeat testing to evaluate the implications of WMD and other special weapon use against U.S. military and civilian assets.</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to support Combatant Commands with development and testing of Chemical, Biological, Radiological, Nuclear, and High-Explosive (CBRNE) sensors, WMD countermeasures, remote geological sensing, and battle management systems designed for surveillance and tracking of WMD targets. - Support Combatant Command exercises and planning events in order to develop existing Counter WMD (CWMD) technologies, tools, and capabilities. - Continue pursuit of state-of-the-art chemical and biological testing capabilities with participation in the Integrated Early Warning program, the inter-agency Layered Sensing Initiative, the Integrated Sensor Architecture, and the Army Technical Support and Operational Analysis (TSOA) in order to satisfy emerging warfighting gaps. - Extend testing in support of the nonproliferation portion of the National Center for Nuclear Security portfolio. 	13.501	13.652	14.345

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RR / Countering WMD Test and Evaluation

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to develop nuclear material detection capabilities through testing of candidate technologies at the Technical Evaluation Assessment and Monitoring Site. - Continue to test and demonstrate credible and threat-based WMD attack scenarios at the Nevada National Security Site for Defense Threat Reduction Agency (DTRA) and partner agency projects supporting development of warfighter-identified missile defeat capability requirements. - Continue to conduct diagnostics, instrumentation, and explosives handling research in support of Department of Energy and National Laboratories Source Physics Experiments, supporting Treaty Verification Technology and Comprehensive Test Ban Treaty initiatives. - Initiate reconstitution of instrumentation and diagnostics sensors infrastructure capabilities in support of Counter-WMD technology development projects. - Continue planning the design and execution of tests characterizing a chemical/biological plume generated by an explosive event in support of the DTRA Agent Defeat Modeling and Simulation Baseline (ADMB) initiative. - Continue to design and build testbeds in small-, mid-, and large-scale environments capable of capturing data needed to improve and validate high-fidelity modeling and simulation tools used to predict weapons effects on WMD storage facilities. - Initiate decoupling test program using conventional explosives to develop modern seismic-acoustic data sets at varying levels of coupling, for the purpose of deriving signatures that are similar to recent nuclear test detonations for treaty verification purposes. - Reconstitute the Photogrammetry Laboratory equipment inventory (static and dynamic) for pre- and post-test characterization of geology deriving seismic-acoustic signatures, and providing imagery for warfighter planning and targeting analyses. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Develop the use of seismo-acoustic arrays as test diagnostics (both hardware and algorithms) and tools for assessing decoupling/coupling. - Continue reconstitution of instrumentation and diagnostics sensors infrastructure capabilities in support of Counter-WMD technology development projects. - Continue additional diagnostics, instrumentation, and explosives handling research in support of other testing and compliance initiatives. - Support Combatant Commands with development and testing of CBRNE sensors and WMD countermeasures being developed to support Combatant Command requirements. - Support exercises and planning events at the Nevada Test Bed in order to develop existing defeat technologies, tools, and capabilities. Further extend testing at the Nevada National Security Site in support of the National Center for Nuclear Security portfolio's nonproliferation efforts. - Continue to design and build testbeds in small-, mid-, and large-scale environments capable of capturing data needed to improve and validate high-fidelity modeling and simulation tools used to predict weapons effects on WMD storage facilities. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RR / Countering WMD Test and Evaluation

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
- Provide development, maintenance, upgrades, and testing for Autonomous Systems Test Development to support an adaptable test bed for standardized evaluation of autonomous systems in development for CWMD missions.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY2018 to FY2019 is due to greater investment in test infrastructure in support of the maintenance and development of WMD countermeasure testing capabilities.			
Accomplishments/Planned Programs Subtotals	13.501	13.652	14.345

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 27/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	0.000	12.500	12.394	-	12.394	12.389	12.389	12.389	12.649	Continuing	Continuing

Remarks

D. Acquisition Strategy

Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603134BR / <i>Counter Improvised-Threat Simulation</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	0.000	13.648	13.648	0.000	0.000	0.000	0.000	Continuing	Continuing
JC: <i>Enable Rapid Capability Delivery</i>	-	0.000	0.000	0.000	13.648	13.648	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

PE 0603134BR / Counter Improvised-Threat Simulation activities were previously authorized and appropriated under the Joint Improvised-Threat Defeat Fund (JIDF).

A. Mission Description and Budget Item Justification

The Defense Threat Reduction Agency (DTRA) Counter Improvised-Threat Simulation Advanced Technology Development program element funds Technology Outreach as well as development of modeling-and-simulation and analysis support tools that enhance counter-improvised explosive devices (C-IED) and counter improvised threat (C-IT) efforts.

Enable Rapid Capability Delivery. Understanding the threat drives a DTRA-JIDO deliberate, structured, and proactive approach to identify and validate urgent or emergent capability gaps and requirements. JIDO's continuous embedded presence with deployed U.S. Joint Forces enables early identification and understanding of C-IED and C-IT gaps, vulnerabilities, and risks and the timely validation, resourcing, development, and delivery of C-IED and C-IT material and non-material solutions. DTRA-JIDO technical integrators embedded with deployed forces further enables rapid adjustments to solutions as the threat's adaptation evolves.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	0.000	13.648	13.648
Total Adjustments	0.000	0.000	0.000	13.648	13.648
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Establish RDT&E Appropriation	-	-	0.000	13.648	13.648

Change Summary Explanation

The increase from FY 2018 to FY 2019 is due to the establishment of the 0603134BR / Counter Improvised-Threat Simulation program element in RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	PE 0603134BR / <i>Counter Improvised-Threat Simulation</i>

Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman's recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603134BR / Counter Improvised-Threat Simulation	Project (Number/Name) JC / Enable Rapid Capability Delivery
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JC: Enable Rapid Capability Delivery	-	0.000	0.000	0.000	13.648	13.648	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Enable Rapid Capability Delivery. Understanding the threat drives a DTRA-JIDO deliberate, structured, and proactive approach to identify and validate urgent or emergent capability gaps and requirements. JIDO's continuous embedded presence with deployed U.S. Joint Forces enables early identification and understanding of C-IED and C-IT gaps, vulnerabilities, and risks and the timely validation, resourcing, development, and delivery of C-IED and C-IT material and non-material solutions. DTRA-JIDO technical integrators embedded with deployed forces further enables rapid adjustments to solutions as the threat's adaptation evolves.

DTRA provides DoD up to an 18-month "head start" on addressing critical warfighter gaps, and enables DoD to deliver the most technologically advanced response to improvised threats. These capabilities are developed from previous JIDO experience and in concert with OGAs, National Labs, Academia, Private Industry, and International Partners.

This project employs Technology Outreach as well as development of modeling-and-simulation and analysis support tools to identify and validate urgent and emergent capability requirements and associated gaps. It provides rapid acquisition and delivery of C-IED and C-IT solutions to address these requirements and gaps.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: JC: Enable Rapid Capability Delivery	0.000	0.000	0.000	13.648	13.648
FY 2018 Plans: N/A					
FY 2019 Base Plans: N/A					
FY 2019 OCO Plans: - Improve detection capabilities through baseline threat signatures for vehicles, explosives, and other threats in support of sensor capability development. - Develop common database for signatures for DoD and OGA to use for sensor development and Tactics, Techniques, and Procedures (TTPs). - Identify and maintain database of future threats and technologies that can be incorporated into improvised threats in support of future capability development.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603134BR / Counter Improvised-Threat Simulation	Project (Number/Name) JC / Enable Rapid Capability Delivery

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Conduct testing and evaluation of future technology development in support of counter improvised threats.					
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to the establishment of JC: Enable Rapid Capability Delivery project in 0603134BR / Counter Improvised-Threat Simulation in the RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman's recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.000	13.648	13.648

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	1,697.109	260.396	268.607	299.858	-	299.858	278.093	283.781	289.325	295.317	Continuing	Continuing
RA: <i>Information Sciences and Applications</i>	33.026	18.102	10.229	11.286	-	11.286	11.480	11.752	12.005	12.258	Continuing	Continuing
RD: <i>Detection Technologies</i>	26.415	16.608	17.556	26.021	-	26.021	27.110	28.170	28.867	29.472	Continuing	Continuing
RE: <i>Counter-Terrorism Technologies</i>	658.580	98.532	103.869	108.978	-	108.978	111.060	113.426	115.596	118.024	Continuing	Continuing
RF: <i>Forensics Technologies</i>	397.190	36.738	40.286	33.578	-	33.578	32.973	33.668	34.371	35.094	Continuing	Continuing
RG: <i>Defeat Technologies</i>	116.069	18.819	22.161	49.277	-	49.277	24.491	24.108	24.578	25.010	Continuing	Continuing
RI: <i>Nuclear Survivability</i>	44.529	5.964	6.658	5.783	-	5.783	5.946	6.025	6.156	6.285	Continuing	Continuing
RL: <i>Nuclear & Radiological Effects</i>	0.000	3.390	3.500	3.427	-	3.427	3.426	3.424	3.424	3.497	Continuing	Continuing
RM: <i>WMD Counterforce Technologies</i>	150.509	23.041	24.663	25.243	-	25.243	25.905	26.911	27.520	28.097	Continuing	Continuing
RR: <i>Countering WMD Test and Evaluation</i>	16.052	0.000	12.500	12.394	-	12.394	12.389	12.389	12.389	12.649	Continuing	Continuing
RT: <i>Target Assessment Technologies</i>	254.739	39.202	27.185	23.871	-	23.871	23.313	23.908	24.419	24.931	Continuing	Continuing

Note

*Program Element 0603160BR name changes from Counterproliferation Initiatives - Proliferation, Prevention and Defeat to Counter Weapons of Mass Destruction Advanced Technology Development beginning in FY 2018.

**Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017. The funding level in this program element continues to reflect the impact of incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

A. Mission Description and Budget Item Justification

The Defense Threat Reduction Agency (DTRA) Counter Weapons of Mass Destruction (WMD) Advanced Technology Development program element funds the development and testing of subsystems and components for integration into prototype systems with the potential to transition into mature, state-of-the-art WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and treaty verification capabilities.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>
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The Advanced Technology Development portfolio is aligned with strategic planning objectives as well as with Science and Technology (S&T) investment direction which is established annually by DTRA. The objectives directly support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community.

The portfolio advances the Countering WMD (CWMD) mission by selecting advanced technology development initiatives that meet the following criteria: (1) Efforts are clearly defined and directly linked to mission-specific capability requirements of DTRA, the Military Departments, Combatant Commanders, other DoD and federal agencies, and international partners; (2) preliminary assessments of subsystems and components offer the highest potential for technological feasibility, operability and producibility upon transition out of S&T research; (3) activities demonstrate cost effectiveness or cost reduction potential of technologies during field testing or simulation at scale.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	266.444	268.607	273.973	-	273.973
Current President's Budget	260.396	268.607	299.858	-	299.858
Total Adjustments	-6.048	0.000	25.885	-	25.885
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-6.048	-			
• Realignments	-	-	-0.821	-	-0.821
• Programmatic Increase	-	-	29.000	-	29.000
• Economic Assumptions	-	-	-2.294	-	-2.294

Change Summary Explanation

The increase in FY 2019 from the previous President's Budget submission is due to the net effect of increased investment to monitor the threat's use and facilitation of IED/sUAS including rotary winged, fixed winged, and improvised, a transfer of funding from this program element to DTRA's Operations and Maintenance appropriation in support of stockpile logistics, a transfer of funding from Program Element 0602718BR for CWMD terrorism support, and lower economic assumptions for inflation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RA / Information Sciences and Applications		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RA: <i>Information Sciences and Applications</i>	33.026	18.102	10.229	11.286	-	11.286	11.480	11.752	12.005	12.258	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Information Sciences and Applications project provides technical expertise and reach-back support to the United States and its allies across the Countering Weapons of Mass Destruction (CWMD) mission space. The project performs continuous modeling of ad hoc computational analyses on the consequences of Weapons of Mass Destruction (WMD) in consultation with military and civilian planners, warfighters, and first responders, and leverages research performed by the Project on Advanced Systems and Concepts for CWMD at the Naval Postgraduate School. The project also supports international CWMD cooperation by developing technologies and concepts suitable for foreign release.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RA: Information Sciences and Applications	18.102	10.229	11.286
Description: Project RA develops modeling and simulation capabilities and provides technical reachback support to maintain and increase decision advantage for the United States and its allies through improved situational understanding across the complete CWMD mission space.			
FY 2018 Plans:			
- Continue to develop the global synthetic population and activity database for modeling infectious disease propagation and impacts of population behaviors and movement after a WMD event in support of Combatant Command force health protection and consequence management planning.			
- Continue to develop detailed models of specified nuclear facilities to analyze vulnerabilities and estimate hazards in support of target and consequence management planning.			
- Continue to develop processes, capabilities, and expertise in Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) in order to provide tailored support to the Department of Defense (DoD) with 24/7 Technical Reachback.			
FY 2019 Plans:			
- Continue to provide tailored support to DoD with 24/7 Technical Reachback via processes, capabilities, and expertise in CBRNE. Leverage this support for partner stakeholders, providing scientific modeling support to Department of Health and Human Services and serving as the Federal Emergency Management Agency's Interagency Modeling and Atmospheric Assessment Center (IMAAC) Technical Operations Hub.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RA / Information Sciences and Applications

B. Accomplishments/Planned Programs (\$ in Millions)

- Research and develop capabilities to predict/simulate Higher Order Effects, including spread of infectious disease and protection from WMD, and other required capabilities to support U.S. Strategic Command (USSTRATCOM).	FY 2017	FY 2018	FY 2019
FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to greater investment in technical reachback support capacity. This increase is driven by an anticipated further increase in requests for reachback support.			
Accomplishments/Planned Programs Subtotals	18.102	10.229	11.286

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	35.048	30.270	31.830	-	31.830	29.977	30.167	30.412	31.270	Continuing	Continuing
• 153/0605502BR: Small Business Innovation Research	10.456	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RD / Detection Technologies		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RD: <i>Detection Technologies</i>	26.415	16.608	17.556	26.021	-	26.021	27.110	28.170	28.867	29.472	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Detection Technologies project continues research formerly conducted under project RF. This project develops, integrates, and transitions advanced concepts, technologies, and subsystems enabling enhanced nuclear and radiological location, identification, and tracking capabilities. Leveraging gains made in applied research efforts, this project produces advancements in range, process time, sensitivity, and accuracy. In addition, this project continues the development of novel concepts and technologies enabling the identification and exploitation of non-radiation based signatures associated with nuclear threats (e.g., transportation of nuclear materials, patterns of activity, or unique materials).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RD: Detection Technologies	16.608	17.556	26.021
Description: Project RD develops, integrates and transitions radiation detection technologies, as well as systems, tools, techniques, and procedures that take advantage of non-radiation based signatures, in order to advance warfighter capabilities to rapidly detect, localize, characterize, and interdict nuclear and radiological threats.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Transition sensor capabilities to replace Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) and Stryker obsolete radiological/nuclear equipment. - Continue to develop, test, and evaluate a handheld radiation monitor replacement that provides radioisotope identification capability and real-time information feed. - Continue to develop and deploy devices to enable low-cost operational testing and evaluation of radiation and nuclear threat signature detectors against simulated special nuclear material sources of interest, high-fidelity radiation test objects, and realistic threat mockups. - Continue to integrate interoperable systems enabling a true common operating picture among nuclear and radiological search teams, across platforms, and within shared or distributed areas. - Continue to test and evaluate new radiation and nuclear threat detection technologies in an operationally relevant environment to validate capabilities, improve prototypes, and provide required performance data. - Complete testing and evaluation of an operational high resolution gamma-ray imager suited for multiple mission sets to support integration with next generation nuclear imaging systems. - Design, fabricate, test, and characterize prototype passive roadside detection systems to determine the location and signature of nuclear material. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RD / Detection Technologies

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Transition near-term technologies, such as helium-3 alternatives and automated particle identification, to generate prototypes and design packages that will meet operational needs. - Conduct advanced, operational testing and evaluation of radiation and nuclear threat detection systems to assess their performance. - Integrate back-end unit capabilities such as internal electronics and communications capabilities, nuclear and radiological signature collections, and non-radiation nuclear threat signature collections into new sensor systems. - Continue to integrate radiation and nuclear threat analysis algorithms into existing systems to evaluate accuracy and effectiveness in reducing process time and form factors. - Continue to demonstrate, test, and transition systems that remotely monitor nuclear and radiological threat signatures in local and wide area searches. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Test the Modular Airborne Gaseous Isotope Collection System (MAGICS) gas collection system in the field in support of closer, sooner, site-specific monitoring. Novel technologies are necessary to conduct gas monitoring in support of nuclear detection missions, as timing, signature strength and complex analysis present challenges. - Develop unattended sensor networks for autonomous detection and analysis. - Catalog relevant seismic signatures, and develop algorithms for signature detection. - Continue to conduct targeted research on component-level technologies, such as low-power electronics, solid-state photodetectors, search and ID algorithms, and helium-3 replacement technologies, which will improve existing detection technology subsystem components. - Develop and integrate nuclear and radiological signature collections into new sensor systems. - Further the development of nuclear threat analysis algorithms to be implemented in existing systems in order to increase accuracy and reduce processing time. - Demonstrate, test, and transition systems that remotely monitor nuclear and radiological threat signatures in small and wide areas. - Improve the setup, maintenance, and peer-to-peer collaboration provided by systems shared among nuclear and radiological search teams. - Test and evaluate new radiation detection technologies in order to validate capabilities, improve prototypes, and provide required performance data to support follow-on development. - Improve capabilities to effectively monitor and control networked systems of sensors, and expand the use of augmented reality to increase situational awareness. - Improve low-visibility, high-precision gamma spectroscopy, particularly for indoor or concealed operation. - Develop and integrate nuclear and radiological signature collections into new sensor systems. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RD / Detection Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Further the development of nuclear threat analysis algorithms to be implemented in existing systems in order to increase accuracy and reduce processing time. - Demonstrate, test, and transition systems that remotely monitor nuclear and radiological threat signatures in small and wide areas. - Improve the setup, maintenance, and peer-to-peer collaboration provided by systems shared among nuclear and radiological search teams. - Test and evaluate new radiation detection technologies in order to validate capabilities, improve prototypes, and provide required performance data to support follow-on development. - Develop new capabilities to emplace detectors into previously denied areas. - Improve capabilities to effectively monitor and control networked systems of sensors, and expand the use of augmented reality to increase situational awareness. - Improve low-visibility, high-precision gamma spectroscopy, particularly for indoor or concealed operation. <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to the transition of monitoring and verification technology efforts from Project RF to Project RD.</p>			
Accomplishments/Planned Programs Subtotals	16.608	17.556	26.021

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	14.570	14.769	16.860	-	16.860	18.287	17.520	17.875	18.249	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RE / Counter-Terrorism Technologies		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RE: <i>Counter-Terrorism Technologies</i>	658.580	98.532	103.869	108.978	-	108.978	111.060	113.426	115.596	118.024	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Counter-Terrorism Technologies project develops and transitions a full spectrum of new technologies to counter emergent weapons of mass destruction (WMD) threats. This project supports the U.S. Special Operations Command (USSOCOM) in two research areas: (1) Countering WMD-Terrorism (CWMD-T) Counterproliferation Research and Development is a collaborative effort to develop advanced, warfighter-unique technologies to defeat terrorist WMD development/acquisition pathways, to include defeat of the devices themselves, while minimizing risks to U.S. forces; (2) USSOCOM CWMD-T Support develops concepts and technologies to integrate and synchronize operations and activities that prevent terrorists and rogue nation states from developing, acquiring, proliferating, or using WMD. This effort supports Commander, USSOCOM responsibilities under the Chairman, Joint Chiefs of Staff Unified Command Plan.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RE: Counter-Terrorism Technologies	FY 2017	FY 2018	FY 2019
Description: Project RE supports Joint U.S. Military Forces, specifically USSOCOM, in the research areas of warfighter-unique, mission-specific WMD defeat, denial, counterproliferation, and interdiction technologies.	98.532	103.869	108.978
FY 2018 Plans:			
<ul style="list-style-type: none"> - Continue to develop offensive counter proliferation, and counter-WMD technologies. - Continue to develop threat specific test articles and analyses for Tiered Threat Modeling Archive. - Continue to develop technologies that defeat unintended radio emissions. - Continue to develop lighter, smaller, more effective breaching capabilities. - Continue to develop next generation flexible x-ray technology applications. - Continue to develop WMD facility breaching technology applications. - Continue to develop Nuclear, Biological, and Chemical (NBC) defense technologies. - Continue to develop WMD render safe technologies. - Continue to develop technologies to maneuver in a WMD environment. - Continue to develop WMD pathway (process and facility) defeat technologies. - Perform prototype testing of machine learning tools for integration with the USSOCOM CWMD Support Program's (SCSP) Next Generation Joint Worldwide Intelligence Communications System (JWICS) Portal. - Integrate High Performance Computing (HPC) into the JWICS operating environment to provide more robust data analytics and improve accuracy of emerging WMD threat forecasts. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RE / Counter-Terrorism Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Develop and test technologies for evaluating large quantities of data and intelligence information to improve smart discovery, data inferencing, and system-generated cueing and alerting capabilities. - Develop Graphic Analytics and Knowledge-Base Reasoning HPC applications. - Initiate development of models to enhance Discover and Search components of the Anticipatory WMD Analyst Reasoning Environment (AWARE) tool. - Continue to develop Dynamic Picture of the Operating Environment (DPOE) Knowledge Graphic and Predictive Analytics for Unknown Unknowns. - Develop Course of Action models for anticipatory adversarial actions. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Continue to develop offensive counterproliferation, counter-WMD technologies in support of combatant command requirements. - Continue development of WMD and pathway defeat technologies, as well as threat-specific test articles and analyses necessary to support the modeling archive used to support such developmental efforts. - Continue to develop lighter, smaller, more effective breaching capabilities. - Continue to develop next generation WMD detection technology applications. - Deploy AWARE V1.0 in DPOE 4.0, the next generation of DPOE that will incorporate research advances in HPC, analytics, and natural language processing. AWARE v1.0 will improve users' ability to identify emerging threat entities with existing personnel resources and reduce missed opportunities. - Integrate HPC software tools into DPOE, leveraging capabilities of high performance computing to improve automated analytics to more accurately or quickly identify events, actors and threats. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to increased investment in an emerging program of record requirement to support and enable greater effectiveness of counter-WMD capabilities.</p>			
Accomplishments/Planned Programs Subtotals	98.532	103.869	108.978

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	0.099	-	-	-	-	-	-	-	-	-	Continuing Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RE / Counter-Terrorism Technologies

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

Prior year funds are related to this project in program element 0602718BR.

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RF / Forensics Technologies
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RF: <i>Forensics Technologies</i>	397.190	36.738	40.286	33.578	-	33.578	32.973	33.668	34.371	35.094	Continuing	Continuing

Note

*Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

A. Mission Description and Budget Item Justification

The Forensics Technologies project develops, integrates, tests, and demonstrates post-detonation nuclear forensics systems providing accurate, rapid, and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts. These forensic capabilities enable the Defense Threat Reduction Agency (DTRA) and its trusted partners to detect, locate, identify, track, and interdict nuclear and radiological threats, including weapons and material, and enablers to their acquisition and development. In accordance with DoD Directive S-2060.04, DTRA serves as the U.S. Government lead for post-detonation National Technical Nuclear Forensics (NTNF) research and development (R&D). As the central NTNF R&D coordinator, DTRA works in consultation with interagency partners to develop and improve ground-based capabilities supporting exploitation and attribution missions. NTNF R&D supports advanced research in the following areas: (1) Prompt nuclear effects exploitation for attribution; (2) nuclear device characterization for forensics; (3) nuclear forensic materials exploitation for attribution.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RF: Forensics Technologies	FY 2017	FY 2018	FY 2019
Description: Project RF supports nuclear forensics by developing: (1) technologies, systems and procedures for post detonation nuclear forensics; (2) on/off-site analysis to meet forensic, verification, monitoring and confidence-building requirements; (3) technologies to detect, locate, identify, track, and interdict nuclear and radiological threats, including enablers to their acquisition and development.	36.738	40.286	33.578
FY 2018 Plans:			
- Continue to develop, test, and demonstrate enhanced prototype technologies for prompt diagnostics, debris collection, analysis and diagnostics, and device and modeling to support nuclear device reconstruction and attribution, as well as to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution.			
- Complete preparations and conduct an interagency technology demonstration and evaluation of end-to-end post-detonation nuclear forensics capabilities.			
- Evaluate surrogate debris materials as part of a demonstration and evaluation of field/fixed laboratory analysis and debris diagnostics processes.			
- Develop, evaluate, and demonstrate surrogate debris materials to validate and verify newly developed capabilities, and to realistically exercise field and fixed laboratory analytic and diagnostic processes.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RF / <i>Forensics Technologies</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to develop, test, and demonstrate prototype ground-based prompt diagnostic technologies that improve sensor portability, with emphasis on size, weight, and power consumption reduction, and expand operational capability. - Initiate transition of advanced prompt diagnostics sensor prototype systems to the U.S. Prompt Diagnostics System. - Expand identification and documentation of improvised nuclear device (IND) signatures through modeling, simulation, and experiments, and develop tools and capabilities to support the attribution of IND detonations. - Evaluate capability to rapidly rule-in/rule-out known foreign devices using prompt and radiochemical signatures in a simulated realistic technology demonstration. - Continue to coordinate with partner nations to enhance and improve global U.S. nuclear forensics and attribution capabilities, under appropriate international agreements. - Initiate simulation of and assess source and propagation data for site-specific signatures from evasive and low-yield underground nuclear explosions. - Continue to develop algorithms and tools for collection and high-fidelity modeling and analysis of local seismic signatures of evasive and low-yield nuclear tests. - Collect and analyze physical response data from natural and man-made events that provide signals similar to those from low-yield, evasive underground nuclear explosions. Compare these data with results produced by computer simulation of the events. - Continue to develop advanced, modular radionuclide gas collection technologies in support of counterproliferation goals and compliance verification for the Non-Proliferation Treaty and the Comprehensive Test Ban Treaty. - Continue to develop advanced technologies to detect and monitor low-yield nuclear tests, including novel techniques for collecting and observing material and electromagnetic emissions and source-region seismic signatures. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Lead a DoD and interagency, end-to-end nuclear forensics process technology demonstration and evaluation of DTRA-developed technologies/methodologies to assess NTNF process improvements and identify potential capability gaps in forensic conclusion confidence, timeliness, and accuracy, and assist in assessing contribution to interagency attribution process and decisions. - Demonstrate 50% decrease in the material nuclear forensics fixed lab process timeline, with increased confidence and decreased technical uncertainties, improving capacity to make conclusions with low uncertainty and high confidence in a relevant timeframe. - Support Discreet Oculus ground-based prompt diagnostics sensor system in support of transfer/transition to USAF U.S. Prompt Diagnostics System (USPDS) program of record. - Complete design, build and installation of regional array, in preparation for transition of array to partner organization. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RF / Forensics Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>- Modify Forensics Inversion Tool Suite (FITS) and Design Signature Database (DSD) forensic tools to better meet stakeholder needs for forensic devices. Los Alamos National Lab FITS tool modifications are being done in conjunction with the Stockpile program.</p> <p>- Prepare to transition recently developed device assessment research and development capabilities to partners at the National Nuclear Security Administration.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease from FY 2018 to FY2019 is due to the transition of monitoring and verification technology efforts from Project RF to Project RD.</p>			
Accomplishments/Planned Programs Subtotals	36.738	40.286	33.578

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	9.176	10.274	10.257	-	10.257	10.466	10.675	10.894	11.123	Continuing	Continuing
• 122/0605000BR: Counter Weapons of Mass Destruction Systems Development	4.479	6.241	6.163	-	6.163	4.821	5.340	5.602	5.720	Continuing	Continuing

Remarks

D. Acquisition Strategy
Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics
Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RG / Defeat Technologies		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RG: <i>Defeat Technologies</i>	116.069	18.819	22.161	49.277	-	49.277	24.491	24.108	24.578	25.010	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defeat Technologies project develops, integrates, demonstrates, and transitions innovative kinetic and non-kinetic weapon capabilities to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat Weapons of Mass Destruction (WMD) while minimizing collateral effects. Technology development focuses on the physical or functional defeat of (1) chemical, biological, nuclear, and radiological threat materials, (2) an adversary's ability to deliver the same, as well as (3) the physical and non-physical support networks enabling both. This program achieves these goals through the systematic identification and maturation of technologies capable of defeating WMD agents or agent-based processes, then integrating them into weapons, delivery systems, or rapid WMD elimination capabilities. This effort includes developing specific WMD agent/agent-based process simulants, test infrastructure, and sampling capability required for effective development, testing, and evaluation of next generation capabilities to ensure optimum weapon solutions are achieved. Requirements are delineated in Agency Priority Lists for lethal and non-lethal Countering WMD (CWMD) capability. Based on specified requirements, weapons and capabilities are transitioned to a Service program of record for system acquisition.

DTRA's Counter- Improvised Explosive Device / Counter - Small Unmanned Aerial Systems (C-IED/C-sUAS) mission includes three primary lines of effort - attack the supporting threat network, protecting US forces, and building partner capacity. Since DTRA already provides this support in helping the Department counter IEDs for the US joint force, it follows that DTRA is the most-appropriate Department asset to undertake this C-sUAS coordination mission - to provide counter threat network support to deployed forces, C-IED/C-sUAS technology solutions, C-IED/C-sUAS training support (deploying and deployed US joint forces), and building partner nation capacity all while coordinating the overall Department's (C-IED/C-sUAS) efforts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RG: Defeat Technologies	18.819	22.161	49.277
Description: Project RG develops advanced technologies and weapon concepts and validates their applicability to CWMD.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Conduct dynamic sled tests of full-scale Heated And Mobile Munition Employing Rockets (HAMMER) weapon system and prepare for technology transition starting in FY 2019. - Conduct full-scale demonstration of access denial and denial-of-use technologies against WMD representative targets. - Accomplish static testing of a full-scale Agent Defeat Penetrator weapon system against a representative WMD target. - Continue development and testing of a new access denial weapon concept. - Continue to develop technologies in support of agent defeat and associated facilities. - Continue to develop and test diagnostic capability to meet emerging needs for agent defeat. - Conduct Modular Autonomous Counter-WMD System (MACS) follow-on incremental component/system demonstration. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RG / Defeat Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Conduct functional defeat system demonstration. - Develop and integrate (MACS) Family of Systems Enabling Technologies in preparation for a system demonstration. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Complete full scale development and testing of Agent Defeat Penetrator weapon in preparation for its consideration in a USAF analysis of alternatives. - Continue full scale prototype demonstration of novel access denial technology in an operational environment. - Build-out prototype of second version of autonomous system and demonstrate system and payload in a relevant environment. - Collect signatures on IED/sUAS in a predictive environments using modeling & simulation. - Provide advanced infrastructure to improve collection of signatures including sensors, lab and field equipment, collection software, and collection tools. - Provide advanced IED/sUAS library analytics to improve database management (including entry, creation of information and vetting of information), search functionality, and 3rd party database queries. - Provide curation, dissemination, and access to collected data. - Develop and establish standardized data collection protocols. - Build, procure, and validate advanced and improvised threats to assist in threat risk analysis. - Develop IED/sUAS Identify Friend or Foe (IFF) low cost solutions to support U.S. forces and improve sensor detection while decreasing false alarm rates and reporting. - Identify and develop passive threat detections for IED/sUAS systems as the technology continues to develop in private industry. - Develop counter-measures to detect and defeat multi-agent enemy IED/sUAS. - Develop acoustic disrupters to defeat enemy IED/sUAS. - Improve sensor integration of C-IED/C-sUAS systems to improve detection and defeat capabilities and reduce the human in the loop. - Develop capability for manned aircraft to detect IED/sUAS in order to protect manned aircraft from potential threat IED/sUAS effects. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to the net effect of the realignment of funds to support experimental activities in Project RM and requirements in Project RE and increased investment to counter small Unmanned Aerial Systems (UAS), (i.e., Tier 1 and 2 UAS), including rotary and fixed winged systems.</p>			
Accomplishments/Planned Programs Subtotals	18.819	22.161	49.277

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RG / <i>Defeat Technologies</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	10.428	11.060	12.959	-	12.959	13.262	13.222	13.436	13.634	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RI / Nuclear Survivability
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RI: Nuclear Survivability	44.529	5.964	6.658	5.783	-	5.783	5.946	6.025	6.156	6.285	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear Survivability project develops, integrates, demonstrates, and transitions innovative technologies for the protection of mission-essential personnel, critical military and national defense capabilities, and associated control and support systems during a nuclear event. Research under this project supports the mission critical systems identified under Department of Defense (DoD) Instruction 3150.09, Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability Policy. The Defense threat Reduction Agency (DTRA) is the DoD-designated center of excellence for electromagnetic pulse survivability assessments. The System Vulnerability and Assessment effort develops nuclear assessment capabilities to support operational planning, weapon effects predictions, and strategic system design. This activity also provides the DoD's nuclear design and protection standards for new and existing systems, e.g., command and control facilities and aircraft. Key systems include the Nuclear Command and Control system, the net-centric thin-line, and both military and civilian satellites and associated support systems. The radiation-hardened nano-electronics effort develops and integrates radiation-hardened, high-performance prototype nano-electronics to meet DoD space and strategic deterrence system requirements. The Human Survivability effort supports the Nuclear Test Personnel Review Program (NTPR), confirming the participation of Atomic Veterans in nuclear testing and radiological events and providing radiation dose assessments. The NTPR is administered by the Department of Veterans Affairs and the Department of Justice for radiogenic disease compensation programs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RI: Nuclear Survivability	5.964	6.658	5.783
Description: Project RI develops, integrates, and transitions novel technologies that radically enhance the survivability and resilience of DoD nuclear forces and their associated control and support systems in the event of an attack or other hostile action.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Continue producing technical reports addressing DoD radiogenic disease concerns; which address Congressional interest in historical veteran radiation exposure and present day radiological exposures of the DoD-affiliated population. - Complete development of the Satellite System Natural and Nuclear Environment Protection Standard. - Initiate development of the Satellite System Natural and Nuclear Environment Protection Handbook. - Complete update of the North Atlantic Treaty Organization (NATO) Allied Engineering Publication AEP-04 Nuclear Survivability Criteria for Armed Forces Material and Installations. 			
FY 2019 Plans:			
- Produce appropriate new or updated standards and handbooks to capture critical information for DoD to verify and validate mission critical systems.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RI / Nuclear Survivability

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Coordinate Satellite System Natural and Nuclear Environment Protection Standard with DoD Stakeholders and the DoD Standardization Program Office. - Continue producing technical reports addressing DoD radiogenic disease concerns; which address Congressional interest in historical veteran radiation exposure and present day radiological exposures of the DoD-affiliated population. - Evaluate Commercial Off the Shelf (COTS) radiation-hardened microelectronics from trusted, commercial sources. - Conduct research to characterize radiation-hardened materials and determine viability for inclusion in DOD systems. - Final independent verification and validation (IV&V) of DIAMONDS coding and data prior to migration to DIAMONDS Next Generation. - Codify the Information Assurance and Accreditation documentation for the transition from DIAMONDS to DIAMONDS Next Generation. Provide supporting documentation to DISA for DIAMONDS cloud operation in support of Federal Data Center Consolidation Initiative. - Commence concurrent DIAMONDS and DIAMONDS Next Generation testing for functional and data validation. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease from FY 2018 to FY 2019 is due to reduced investment in stockpile logistics and Mighty Guardian.</p>			
Accomplishments/Planned Programs Subtotals	5.964	6.658	5.783

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	30.085	34.103	32.732	-	32.732	33.723	34.479	32.915	33.841	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RL / Nuclear & Radiological Effects		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	0.000	3.390	3.500	3.427	-	3.427	3.426	3.424	3.424	3.497	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear and Radiological Effects project develops, integrates, and transitions nuclear and radiological assessment modeling tools for use in military planning processes. The assessment modeling tools provide critical analytics for Consequence of Execution (COE) considerations during nuclear targeting and post-detonation nuclear response, supporting interagency strategic and tactical decision making. These COE considerations can include the full range of political, military, economic, social, infrastructure, and information (PMESII) factors and their interaction, extending analytical capabilities beyond common damage assessment practices and into second and third order effects. These activities/efforts support Combatant Commands and other Department of Defense (DoD) organizations by providing accurate and reliable consequence assessment and response information.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RL: Nuclear and Radiological Effects	3.390	3.500	3.427
Description: Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapons effects predictions, and strategic system design decisions.			
FY 2018 Plans: - Continue to add militarily significant nuclear weapon effects to tools specifically designed for transition to military targeting systems. - Continue to add militarily significant nuclear weapon effects to tools specifically designed to support nuclear survivability and standards formulation.			
FY 2019 Plans: - Develop natural gas and water/seawater effects models in support of U.S. Strategic Command (USSTRATCOM) Consequences of Execution (COE) efforts, linking higher order effects to PMESII analyses. - Integrate, demonstrate, and deliver a suite of consistent and enhanced models, tools, references, and data to US and Allied nuclear weapon effects stakeholders.			
FY 2018 to FY 2019 Increase/Decrease Statement: No significant change.			
Accomplishments/Planned Programs Subtotals	3.390	3.500	3.427

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RL / Nuclear & Radiological Effects
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	26.419	29.228	29.388	-	29.388	30.054	30.723	31.413	32.072	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RM / WMD Counterforce Technologies		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RM: WMD Counterforce Technologies	150.509	23.041	24.663	25.243	-	25.243	25.905	26.911	27.520	28.097	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Weapons of Mass Destruction (WMD) Counterforce Technologies project develops, integrates, demonstrates, and transitions emerging technologies enabling efforts to find, characterize, assess, and plan for the defeat of WMD threats. There are three core research efforts in this project: (1) The WMD battlespace awareness effort provides warfighters with capabilities to find, characterize, and assess WMD threats. This effort develops and integrates sensing technologies with multi-mission Unmanned Aerial System payloads. (2) The Countering WMD (CWMD) weapons effects effort develops modernized, fast-running, validated CWMD planning tools and integrates modeling and simulation software to optimize the execution of WMD and associated hard target defeat operations. (3) The Innovative Technologies and Engineering effort takes promising technologies discovered under fundamental and basic research and further develops them to increase the effectiveness of weapons against blast doors and other underground structures for functional defeat of Underground Facilities (UGFs), WMD, and their delivery systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RM: WMD Counterforce Technologies	23.041	24.663	25.243
Description: Project RM provides: (1) full-scale testing of CWMD weapons effects, weapon effects modeling, and weapon delivery system optimization; and (2) WMD sensor, surveillance, and data processing technologies.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Demonstrate sample extraction prototype capability for rapid sampling of hazardous chemicals from solid storage. - Continue to demonstrate enhanced WMD sample collection and analysis systems for low-visibility search operations. - Demonstrate mission planning and analytical tools for chemical -search operations, including sensor emplacement and source attribution. - Design, test, and integrate agitation and injection system upgrades to increase target prosecution efficiency and effectiveness. - Conduct End-User Evaluations and Operational Evaluations in specific test series to gain operator perspective and to determine system effectiveness and operational utility against WMD targets in representative environments. - Begin phase two of three new software architecture developments, allowing WMD defeat modeling and simulation planning tools (i.e., Integrated Munitions Effects Assessment (IMEA) ,and Vulnerability Assessment and Protection Option (VAPO) to more quickly and efficiently enhance integration with planning tools used by partner agencies and international allies. . - Conduct proof of concept demonstrations for enhanced area search sensors and capabilities for biological weapon search missions. 			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RM / WMD Counterforce Technologies

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Complete Chemical Intelligence, Surveillance, and Reconnaissance (ISR) area search mission planning tool proof of concept to enhance capabilities to search for, detect, and identify chemical threats prior to release. - Transition the Loop-mediated isothermal Amplification (LAMP), the Biological ISR Sample Collection (SCOUT), and the Sampling Capability Improvement Project (SCIP) to the Joint Program Executive Office – Chemical and Biological Defense (JPEO-CBD) in support of Biological ISR sample collection capability improvements. - Conduct mission-oriented experiments to model, simulate, analyze, or exploit technical capabilities intended to counter WMD or mitigate risks and impacts to critical assets in operationally relevant conditions. - Release updated version of modernized, fast-running, validated IMEA, a CWMD modeling and simulation (M&S) planning tool, incorporating near-miss lethality, weapons data, and concrete modeling, to optimize the execution of WMD and associated hard target defeat operations. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 is due to increased investment in disruptive technologies and experiments.</p>			
Accomplishments/Planned Programs Subtotals	23.041	24.663	25.243

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	11.702	14.552	12.780	-	12.780	12.991	13.736	13.483	14.081	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development					Project (Number/Name) RR / Countering WMD Test and Evaluation		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RR: <i>Countering WMD Test and Evaluation</i>	16.052	0.000	12.500	12.394	-	12.394	12.389	12.389	12.389	12.649	Continuing	Continuing

Note

**Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Countering WMD Test and Evaluation Project RR provides a unique national test bed capability for simulated weapons of mass destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat testing to respond to operational needs by developing and maintaining test beds used by the Department of Defense (DoD), the Military Services, the Combatant Commanders and other Federal Agencies to evaluate the implications of WMD, conventional, and other special weapon use against U.S. military or civilian systems and targets.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RR: Countering WMD Test and Evaluation	FY 2017	FY 2018	FY 2019
	0.000	12.500	12.394
Description: Project RR provides a unique national test bed capability for simulated WMD facility characterization, weapon-target interaction, and WMD facility defeat testing.			
FY 2018 Plans:			
- Support Combatant Command exercises and planning events at the Nevada Test Bed in order to develop missile defeat technologies, tools, and capabilities.			
- Develop interagency capabilities and special tests in support of national priority programs and mission requirements.			
- Augment scheduling, test planning, maintenance and analysis capabilities for missile defeat technology tests and demonstrations.			
FY 2019 Plans:			
- Continue support for Combatant Command exercises and planning events at the Nevada Test Bed in order to develop target defeat technologies, tools, and capabilities.			
- Maintain and further develop interagency capabilities and special tests in support of national priority programs and mission requirements.			
- Support the planning, execution, and analysis of two major CWMD test and demonstration events at the Nevada National Security Site or other locations within or outside the continental U.S.			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RR / Countering WMD Test and Evaluation

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
No significant change.			
Accomplishments/Planned Programs Subtotals	0.000	12.500	12.394

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	13.501	13.652	14.435	-	14.435	14.816	15.156	15.451	15.775	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RT / Target Assessment Technologies			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RT: <i>Target Assessment Technologies</i>	254.739	39.202	27.185	23.871	-	23.871	23.313	23.908	24.419	24.931	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Target Assessment Technologies project develops, integrates, tests, demonstrates, and transitions processes and technologies providing advanced capabilities in the areas of Weapons of Mass Destruction (WMD) target assessment and functional defeat. The functional defeat process includes finding and identifying a facility, characterizing its function and physical layout, determining current or future vulnerabilities to available defeat mechanisms, planning and executing an attack, assessing damage, and denying reconstitution efforts. Applying these processes to time-dependent constraints related to WMD target characterization and threat analysis presents a further technical challenge. This project develops analytical tools and processes required to (1) find and characterize WMD targets and associated hard and deeply buried targets (HDBTs) and to (2) to assess in real time the results of physical and functional defeat operations (such as a direct attack). These novel, dynamic capabilities enable Combatant Commands (CCMDs) and the intelligence community (IC) to hold at risk high value targets possessed by adversaries.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RT: Target Assessment Technologies	39.202	27.185	23.871
Description: Project RT provides CCMDs and the IC with technologies and processes to find and characterize WMD targets and hard and deeply buried targets and then assess the results of attacks against those targets.			
FY 2018 Plans:			
<ul style="list-style-type: none"> - Complete prototype development, final documentation, and technical report in preparation for transition of a deployable remote ground sensor project. - Develop detailed feasibility study and program plan for WMD and Hard Target automated characterization capability. - Continue to develop comprehensive soil model library for support of geotechnical site characterization of WMD target sites. - Refine and enhance WMD complex modeling capabilities for integration with automated target characterization. - Integrate functional defeat and "pattern of life" models into automated target characterization capability. - Deliver enhanced counter-WMD and underground facility (UGF) schoolhouse training exercises to IC and Combatant Commands. 			
FY 2019 Plans:			
<ul style="list-style-type: none"> - Complete engineering rule-based development for automated advanced targeting characterization efforts to meet CCMD and IC WMD and HDBT characterization and defeat requirements. - Further develop the Functional Defeat Enterprise process including identifying facility functions, determining defeat vulnerabilities in support of attack planning and execution, and determining new battle damage information methods. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RT / Target Assessment Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Develop cooperative CWMD project technical exchange with the United Kingdom (UK) in support of a U.S./UK Project Agreement. - Continue to develop complex geotechnical models for support of geotechnical site characterization of WMD target sites. <p>FY 2018 to FY 2019 Increase/Decrease Statement: The decrease from FY 2018 to FY 2019 is due to decreased investment in target sensing technologies and WMD target engagement to fund higher priority baseline test and demonstration requirements across the counter-WMD research and development portfolio.</p>			
Accomplishments/Planned Programs Subtotals	39.202	27.185	23.871

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	12.993	242.668	255.661	12.743	13.207	13.656	13.942	Continuing	Continuing
<i>JS: Assist Situational Understanding</i>	-	0.000	0.000	0.000	13.141	13.141	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>JR: Enable DoD Responsiveness</i>	-	0.000	0.000	0.000	7.725	7.725	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>JC: Enable Rapid Capability Delivery</i>	-	0.000	0.000	12.993	221.802	234.795	12.743	13.207	13.656	13.942	Continuing	Continuing

Note

PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing activities were previously authorized and appropriated under the Joint Improvised-Threat Defeat Fund (JIDF).

A. Mission Description and Budget Item Justification

The Counter Improvised-Explosive Device (C-IED) Counter Improvised-Threat (Counter-IT) Technology Demonstration, Prototype Development, and Testing program element supports the development, demonstration, and testing of defeat technologies for advanced wireless signals, compatible electronic counter-measures for IED and IED-facilitation defeat/neutralization, miniaturized and integrated sensors, hand-held detectors, and cutting edge Information Technology enabler capabilities.

This includes providing and enabling open, fully sharable information, and analytical software tools; situational understanding of the threat's tactics, techniques, and procedures (what is urgent and emerging); C-IED and related C-IT material solutions prototyping, experimentation, development, and delivery; and training integration support to ensure deploying and deployed forces' readiness is sustained as new equipment and methods are delivered.

Assist Situational Understanding (JS) of threat-network activities. The IED and other disruptive improvised threats represent a continuing and irregular threat for deployed U.S. and coalition forces. In order to counter the threat, a deep understanding of IED and improvised threat use and facilitation is required. This DTRA capability is enabled by an advanced information technology infrastructure, analytical software tools, deployed and embedded DTRA operations integrators and intelligence analysts, and current and integrated operational data. Supported by CONUS-based reach-back linked to the intelligence community, the inter-agency, and coalition partners, analytics, when combined with production from the Defense Intelligence Enterprise, enables more complete threat awareness and understanding by deploying and deployed US forces to support their planning and targeting. This core function also informs research and development and threat-based rapid prototyping investment decisions, guides international and interagency coordination to enable counter threat-network support, and supplements U.S. Joint Force pre-deployment training to ensure the most recent threat is understood and new counter improvised threat systems can be properly utilized.

Enable DoD Responses to Improvised Weapons (JR). DTRA builds counter-IED and improvised threat solutions in full collaboration with its partners. Through a robust communities of action approach, DTRA coordinates with the Combatant Commanders (CCDRs), the Joint Staff, the Military Departments/Services, the interagency,

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>
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coalition partners, industry, and academia to develop counter IED and improvised threat solutions that further enable the maneuverability and force protection of deployed U.S. Joint Forces. This methodology leverages the authorities, access, and capabilities of the entire U.S. Government and its partners to garner support for counter IED and improvised threat development and delivery.

Enable Rapid Capability Delivery (JC). Understanding the threat drives a DTRA deliberate, structured, and proactive approach to identify and validate urgent or emergent capability gaps and requirements. DTRA's continuous embedded presence with deployed U.S. Joint Forces enables early identification and understanding of C-IED and C-IT gaps, vulnerabilities, and risks and the timely validation, resourcing, development, and delivery of C-IED and C-IT material and non-material solutions. DTRA technical integrators embedded with deployed forces further enables rapid adjustments to solutions as the threat's adaptation evolves.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	12.993	242.668	255.661
Total Adjustments	0.000	0.000	12.993	242.668	255.661
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Establish RDT&E Appropriation	-	-	12.993	242.668	255.661

Change Summary Explanation

The increase from FY 2018 to FY 2019 is due to the establishment of the 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing program element in the RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman's recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4				R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>				Project (Number/Name) JS / <i>Assist Situational Understanding</i>				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JS: <i>Assist Situational Understanding</i>	-	0.000	0.000	0.000	13.141	13.141	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project enables DTRA to understand and analyze global threat information. It is an Information Technology (IT) Operations quick-reaction capability supported by the rapid collection, fusion, and dissemination of operational-intelligence, and technology in order to enable the defeat of threat networks that employ disruptive technologies.

The JIDO advanced Mission Information Technology (MIT) capability, its software Systems Integration Lab (SIL), and embedded CCMD-direct support and reachback staff, continuously create capabilities to ingest, fuse, analyze, and present mission relevant data and information that provides immediate assistance to DoD and the whole of government. This capability, called Catapult, is a fully accredited SIPR and JWICS based analytical cloud architecture. The Catapult architecture pulls from over more than 850 SIPR and more than 170 JWICS data sources and allows for simple and open data access, system stability, scalability, and advanced analytics. In addition to Catapult, the MIT created another significant capability called Voltron. Voltron provides analysts access to SIGINT data within a secure and IC-accredited software developer environment. Voltron, give analysts access to continuously new models in support of "Attack the Network" analysis and operations. Voltron provides analysts access to methodologies involving multi-INT fusion in an easy to use interface. These methods are based on years of experience supporting tactical targeting environment and built in collaboration with other teams across the Intelligence Community. There are currently more than 75 models in Voltron available to the user community.

DTRA's authorities and mission have enabled a unique "Path-to-Production" (PTP) for mission-driven IT solutions. This unique development environment includes an integrated Cyber Security Assessment and Authorization (A&A) process, an in-house collateral Authorizing Official (AO), a strong partnership between technologists and intelligence analysts working real-world problems, and a collaborative and innovative culture that launches practical software solutions rapidly.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: JS: Assist Situational Understanding	0.000	0.000	0.000	13.141	13.141
FY 2018 Plans: N/A					
FY 2019 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JS / <i>Assist Situational Understanding</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>N/A</p> <p>FY 2019 OCO Plans:</p> <ul style="list-style-type: none"> - Effort to consolidate Web Visualizations for DTRA IED/sUAS data. This will include the Common Intelligence Picture/Common Operational Picture and technical data and will serve as the platform for creation of C-IED/C-sUAS analytics. - Build a data science enabled module that will crawl through Catapult reporting and identify reports related to IED/sUAS events. Through machine learning techniques and application of training data, the team will train this module to identify reports that normal queries may miss. These reports will serve as the base data set for the C-IED/C-sUAS event table. - Prepare a list of vetted IED/sUAS events pulled from Catapult reporting. Events will be broken down into relevant categories with associated attributes. - Stand up a database of technical data associated with known IED/sUAS. Library will be available for direct query and incorporated into other C-IED/C-sUAS capabilities. - Integrate Virtual Management System processes and capabilities to build 3D models for various maritime vessels requested by external SOF customer. - Develop and test a software mapping tool and spatial data analytics technology web service capable of a providing user functionality to create basic geospatial analytic outputs (i.e., line of sight, route vulnerability, etc.). - Generate additional Data Science tables populated with entities extracted from Catapult using Riplt regex trees. This will provide a "truth set" for future Natural Language Processing. - Develop and Test new tools allowing for the visualizing (and effects) of underwater explosions. - Develop a new application (Thor) as a "rules-based" approach to existing Avengers/Phoenix models. Thor is planned to enhance sensitive site exploitation (SSE) data with a tool will provide comprehensive approach to SSE vetting. - Develop capability to visualize and derive trends for Air and Marine Operations Center non-commercial flight data. - Develop and test an Interactive interface which will provide access to the Avenger tool suite on selective networks. - Scope and Design the Data Science software and tool development environment as to create containerized tools which will provide a standard working image across the multiple networks. - Provide a methodology to leveraging contextual clues from reporting, provide additional information about individual person entities extracted from reports. (i.e., job title). 					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JS / Assist Situational Understanding

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<ul style="list-style-type: none"> - Develop and Test custom webpages that will provide “pre-vetted” data against analyst problem set. Automated workflow built for specific customer needs. - Develop and test a web-based Horizon version to act as a location intelligence discovery tool. The tool will provide geospatial querying within 2D maps to users as a light weight alternative to the smart-client version. - Develop and test a web-based C2IS2 tool that will provide OP/INTEL users with the capability to capture and manage the processes, observables, and signatures associated with IED operations and use that data for training, analysis, collection planning, and exploitation. - Continued improvements to the JIDO DevOps Pipeline and maturing the approach to delivery using containers - Deploy a subset of the Attack the Network Tool Suite (ANTS) application on Non-Classified Local Area Network and an easy navigation directory. - Provide Integration and Test activities against a Battlefield Information Collection and Exploitation System (BICES) instance of Catapult. Upgrade and test all applications to work with Metrics across the ANTS Suite, upgrade the user account and authentication in relation to the F5/Certificate Authentication System, and deploy Horizon Web. - Conduct System Integration of Catapult and all ANTS applications on the new HP Moonshot hardware. - Support proper deployment procedures and provide a test environment for the newly deployed Catapult and ANTS related applications on HP Moonshot hardware. - Test all Catapult and all ANTS applications at a COOP location. <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to the establishment of Project JS-Assist Situational Understanding in Program Element 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing in the RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman’s recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)</p>					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.000	13.141	13.141

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JS / <i>Assist Situational Understanding</i>

D. Acquisition Strategy
Assessment and selection of best performer to provide contractual services to develop and operationalize requirements through the new Enterprise Acquisition Strategy Initiative (EASI) at the least risk, optimal cost and proven technically. Performer base selection includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics
Performing contractors operate under a Cost Plus\Award Fee contract measured by a number of mutually agreed Service Level Agreements (SLAs). Measurement Awards is done semi-annually. The contractor is required to provide Monthly status and progress against the SLAs.

System metrics are measured by usage to include network, number of users, data, scope, integrations, and access.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JS / Assist Situational Understanding
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.622	Dec 2018	1.622	Continuing	Continuing	-
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.695	Dec 2018	0.695	Continuing	Continuing	-
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.391	Mar 2019	1.391	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.391	Mar 2019	1.391	Continuing	Continuing	-
Subtotal			-	-		-		0.000		5.099		5.099	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.361	Dec 2018	0.361	Continuing	Continuing	-
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.155	Dec 2018	0.155	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JS / Assist Situational Understanding
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.309	Mar 2019	0.309	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.309	Mar 2019	0.309	Continuing	Continuing	-
Combatant Command C-IED Exercise Support Intergration Program (J7)	MIPR	Various : N/A	-	-		-		0.000		1.811		1.811	Continuing	Continuing	-
Subtotal			-	-		-		0.000		2.945		2.945	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.262	Dec 2018	1.262	Continuing	Continuing	-
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.541	Dec 2018	0.541	Continuing	Continuing	-
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.080	Mar 2019	1.080	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		1.081	Mar 2019	1.081	Continuing	Continuing	-
Subtotal			-	-		-		0.000		3.964		3.964	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JS / Assist Situational Understanding
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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Direct Operations Support	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.361	Dec 2018	0.361	Continuing	Continuing	-
Attack the Network Suite (MIT) - Systems Integration Lab (SIL) - Mission IT Capability Development (Automation and Data Science)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.154	Dec 2018	0.154	Continuing	Continuing	-
QRC IT Network (OIR)	C/CPAF	Booz Allen Hamilton : Reston, VA	-	-		-		0.000		0.309	Mar 2019	0.309	Continuing	Continuing	-
QRC IT Network (RS)	C/CPAF	QRC IT Network (RS) : Reston, VA	-	-		-		0.000		0.309	Mar 2019	0.309	Continuing	Continuing	-
Subtotal			-	-		-		0.000		1.133		1.133	Continuing	Continuing	N/A
Project Cost Totals			-	-		0.000		0.000		13.141		13.141	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JS / <i>Assist Situational Understanding</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
N/A																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JS / <i>Assist Situational Understanding</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
N/A	1	2019	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JR / Enable DoD Responsiveness
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JR: Enable DoD Responsiveness	-	0.000	0.000	0.000	7.725	7.725	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project enhances U.S. Joint Forces' responsiveness to improvised weapons. DTRA builds counter-threat solutions in full collaboration with its partners. Through a robust communities of action approach, DTRA coordinates with the Combatant Commanders (CCDRs), the Joint Staff, the Military Departments/Services, the interagency, coalition partners, industry, and academia to develop C-IED and C-IT solutions that further enable the maneuverability and force protection of deployed U.S. Joint Forces. This methodology leverages the authorities, access, and capabilities of the entire U.S. Government and its partners as counter-improvised threat solutions are developed and realized.

DTRA responds to the following improvised threats: Home-Made Explosives (HME), Vehicle-Borne IED (VBIED), Unmanned Aerial Systems (UAS) Vehicle-Attached IED (VAIED), Anti-Armor IED (AIED) Buried IED, Radio Controlled IED (RCIED), Person-Borne IED (PBIED), Booby Trapped Structures (BTS), Improvised WMD, Water-Borne IED (WBIED), Tunnels, and emerging threats that are identified by the warfighter deployed forward.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: JR: Enable DoD Responsiveness	0.000	0.000	0.000	7.725	7.725
FY 2018 Plans: N/A					
FY 2019 Base Plans: N/A					
FY 2019 OCO Plans: - Leverage capabilities and expertise primarily from Department of Defense University Affiliated Research Centers (UARC)s such as Georgia Tech Research Institute (GTRI) and Massachusetts Institute of Technology (MIT) Lincoln Labs. - Delivers technical reports in response to RFIs submitted by JIDO Program/System Integrators and JIDO Initiative Evaluation Team Members. - Conduct Joint Lab Board in support of rapid development and prototyping to counter improvised threats. - Conduct Hacking 4 Defense in support of rapid development and prototyping to counter improvised threats.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JR / Enable DoD Responsiveness

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
- Develop Broad Area Announcement (BAA) solicitation in support of capabilities to counter improvised threats.					
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to the establishment of Project JR-Enable DoD Responsiveness in Program Element 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing in the RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman's recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.000	7.725	7.725

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics

Percentage of completed Counter Improvised-Threat Technology demonstration programs transitioning to Warfighter each year.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JR / <i>Enable DoD Responsiveness</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
N/A																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JR / <i>Enable DoD Responsiveness</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
N/A	1	2019	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing					Project (Number/Name) JC / Enable Rapid Capability Delivery		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
JC: Enable Rapid Capability Delivery	-	0.000	0.000	12.993	221.802	234.795	12.743	13.207	13.656	13.942	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project harnesses an in-depth understanding of the threat leading to identification and validation of urgent or emergent counter-threat requirements and Combatant Command capability gaps. In turn, DTRA-JIDO rapidly provides Counter - Improvised Explosive Device/ Counter- small Unmanned Aerial Systems (C-IED/C-sUAS) and C-IT solutions to prevent or mitigate battlefield operational surprise. DTRA's continuous embedded presence with deployed U.S. Joint Forces and coordination with Military Service components enables full transparency of investment activities and provides for the early identification and understanding of C-IED and C-IT risks and vulnerabilities which enable the timely validation, development, and delivery of counter-threat material and non-material solutions.

DTRA delivers counter-threat materiel solutions in support of US Joint Forces supporting contingency operations, effectively addressing changes to threat Tactics, Techniques, and Procedures (TT&P) affecting deployed forces. Capability incorporates an embedded tactical presence to understand a continuously evolving threat environment and complete visibility of the current DoD counter-threat portfolio to enable rapid response to warfighter vulnerabilities and to enhance force protection and maneuverability. DTRA responds to the following improvised threats: Home-Made Explosives (HME), Vehicle-Borne IED (VBIED), Unmanned Aerial Systems (UAS) Vehicle-Attached IED (VAIED), Anti-Armor IED (AIED) Buried IED, Radio Controlled IED (RCIED), Person-Borne IED (PBIED), Booby Trapped Structures (BTS), Improvised WMD, Water-Borne IED (WBIED), Tunnels, and emerging threats that are identified by the warfighter deployed forward.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: JC: Enable Rapid Capability Delivery	0.000	0.000	12.993	221.802	234.795
FY 2018 Plans: N/A					
FY 2019 Base Plans: - Conduct and participate in test and evaluation events in support of improvised threats. - Develop and test C-IED/C-sUAS systems for compatibility prior to systems deploying to operational theaters in support of the warfighter. - Maintain production platforms that support the development and fielding of capabilities that combat improvised threats and the network. - Improve deployable forensic field kits to provide near real time feedback and reduce the reach back support requirement.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JC / <i>Enable Rapid Capability Delivery</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<ul style="list-style-type: none"> - Conduct modeling and simulation in support of countering improvised threats - Continue threat device characterization, prototyping and production. <p>FY 2019 OCO Plans:</p> <ul style="list-style-type: none"> - Increase Positive Detection (PD) and acceptable False Alarm Rate (FAR) with multiple integrated sensors in Latest Time of Value (LTOV) in support of Standoff Detection of improvised threats - Improve size, weight, power and integration of sensors to small unmanned systems. - Improve on-board vs. off-board data processing to provide real time data in unmanned systems to support real-time improvised threat detection. - Develop Magnetometers that can detect items emplaced on vehicle and report to mobile app in support of VAIED friendly notification. - Develop the ability to reverse polarity of the vehicle upon emplacement of magnet in support of VAIED. - Improve video monitoring/physical security in support of VAIED notification. - Identify and develop technology that is portable enough to look through walls and identify hazards with fidelity in real-time for BTS. - Develop imagery that can provide fidelity to operator and complete inspection of room in support of BTS - Proof of concept for unmanned vehicle that can autonomously operate within confined spaces and provide necessary imagery to operator for BTS - Integrate sensor to detect various anomalies in unstructured environment with the ability to detect through clothes and report in real-time at safe standoff distances in support of PBIED - Identify / develop biometry and non-cooperative biometrics from standoff distance in support of behavioral prediction and tracking in uncontrolled environments in support of PBIED. - Obtain baseline threat signatures for vehicles to support sensor development for VBIED detection. - Improve bulk explosive detection through metal at standoff distance in support of VBIED. - Improve automatic slewing of sensors and non-lethal vehicle/driver stopping technologies for stopping VBIED. - Develop counter measures for RCIED's based on the evolving global network environments (4G, LTE and 5G). - Identify alternative methods to Common Timing Protocol (CTP) for current and future Electronic Counter Measure (ECM) capabilities. - Develop remote neutralization of HME and pre-cursors: through the use of chemical neutralization, dilution solutions, and dispersants while controlling the thermal degradation to target HME manufacturing without putting the warfighter in harm's way. 					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JC / Enable Rapid Capability Delivery
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<ul style="list-style-type: none"> - Improve / develop threat Improvised Explosive Device/small Unmanned Aerial Systems (IED/sUAS) detect and defeat capabilities against future technology: acoustic detection at range, machine learning of constantly changing threat signatures (acoustic, RF signal, radar cross-section, optics, Unattended Radiated Emissions (URE), etc.) - Develop anti-armor detection and defeat capabilities: Real-time reporting from sensors on mounted vehicles that can detect road-side threats in high clutter, while operating at speed, with high Positive Detection and acceptable False Alarm Rate. - Develop real-time data processing of signal in subterranean environment to improve friendly operations in a tunnel. - Improve in-tunnel ISR and communications. - Develop explosive formulations and rapid remediation techniques for improvised threats in support of improvised threats in tunnels. - Test and develop airborne detection using thermal changes in earth or condensation anomalies presented by voids for detection of tunnels. - Improve smaller laser to support pre-detonation capabilities - Improve size, weight and power for next generation of pre-detonation systems - Improve mounted detection of buried IEDs through real-time reporting from sensors on mounted vehicles that can detect buried threats at depths while conducting maneuver ops at speed with high Positive Detection and acceptable False Alarm Rate. Hardware improvements enable faster sensing and software improvements enable faster systems-of-systems reporting (higher Positive Detection and lower False Alarm Rate). <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 is due to the establishment of Project JC-Enable Rapid Capability Delivery in Program Element 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing in the RDT&E appropriation. This reflects the realignment of the DTRA-JIDO research and development activities in accordance with Congressional intent to terminate the Joint Improvised-Threat Defeat Fund in section 9015 of the Chairman's recommendation to the Senate Appropriations Committee for the Department of Defense Appropriations Bill, 2018 (FY 2018 Baseline: \$0 million.)</p>					
Accomplishments/Planned Programs Subtotals	0.000	0.000	12.993	221.802	234.795

C. Other Program Funding Summary (\$ in Millions)

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JC / <i>Enable Rapid Capability Delivery</i>

C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes research developers across DoD and other Government agency laboratories, academia, and industry.

E. Performance Metrics

Percentage of completed Counter Improvised-Threat Technology demonstration programs transitioning to Warfighter each year.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JC / Enable Rapid Capability Delivery
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Iris Trace	C/TBD	I2WD-COMMUNICATIONS-ELECTRONICS RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (CERDEC) : Aberdeen, MD	-	-		-		1.236	Dec 2018	0.000		1.236	Continuing	Continuing	-
Iris Sanctum	TBD	Central Intelligence Agency : Fairfax, VA	-	-		-		1.751	Dec 2018	0.000		1.751	Continuing	Continuing	-
Tough Luck	C/TBD	Johns Hopkins University : Baltimore, MD	-	-		-		1.545	Dec 2018	0.000		1.545	Continuing	Continuing	-
Velvet Paper	C/TBD	Johns Hopkins University/Navy : Various	-	-		-		1.545	Dec 2018	0.000		1.545	Continuing	Continuing	-
Anti-Armor IED (AAIED)	C/TBD	TBD : TBD	-	-		-		0.000		4.000	Dec 2018	4.000	Continuing	Continuing	-
Booby Trapped Structures (BTS)	C/TBD	TBD : TBD	-	-		-		0.000		3.850	Dec 2018	3.850	Continuing	Continuing	-
Buried IED	C/TBD	TBD : TBD	-	-		-		0.000		19.750	Mar 2019	19.750	Continuing	Continuing	-
Home-Made Explosives (HME)	C/TBD	TBD : TBD	-	-		-		0.000		18.100	Dec 2018	18.100	Continuing	Continuing	-
Network	C/TBD	TBD : TBD	-	-		-		0.000		40.668	Dec 2018	40.668	Continuing	Continuing	-
Person-Born IED (PBIED)	C/TBD	TBD : TBD	-	-		-		0.000		5.000	Dec 2018	5.000	Continuing	Continuing	-
Radio Controlled IED (RCIED)	C/TBD	TBD : TBD	-	-		-		0.000		32.500	Mar 2019	32.500	Continuing	Continuing	-
Tunnel	C/TBD	TBD : TBD	-	-		-		0.000		7.000	Dec 2018	7.000	Continuing	Continuing	-
Unmanned Aerial Systems (UAS)	C/TBD	TBD : TBD	-	-		-		0.000		58.955	Mar 2019	58.955	Continuing	Continuing	-
Vehicle-Attached IED (VAIED)	C/TBD	TBD : TBD	-	-		-		0.000		1.000	Dec 2018	1.000	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing	Project (Number/Name) JC / Enable Rapid Capability Delivery
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Vehicle-Borne IED (VBIED)	C/TBD	TBD : TBD	-	-		-		0.000		19.550	Dec 2018	19.550	Continuing	Continuing	-
Water-Borne IED (WBIED)	C/TBD	TBD : TBD	-	-		-		0.000		2.000	Mar 2019	2.000	Continuing	Continuing	-
Subtotal			-	-		-		6.077		212.373		218.450	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TAG Modeling and Simulation	C/TBD	Naval Air Weapons Station : China lake, CA	-	-		-		2.575	Dec 2018	-		2.575	Continuing	Continuing	-
Theater Support Test (JTB)	TBD	Naval Air Weapons Station : China Lake, CA	-	-		-		2.796	Dec 2018	-		2.796	Continuing	Continuing	-
Threat Devices Characterization Prototyping and Production	TBD	I2WD-COMMUNICATIONS-ELECTRONICS RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (CERDEC) : Aberdeen, MD	-	-		-		1.545	Dec 2018	-		1.545	Continuing	Continuing	-
Rapid Experimentation and Analysis for Development Support (READS)	C/TBD	TBD : TBD	-	-		-		0.000		2.060	Mar 2019	2.060	Continuing	Continuing	-
Joint Test Board	TBD	TBD : TBD	-	-		-		0.000		5.074	Dec 2018	5.074	Continuing	Continuing	-
OC25	C/TBD	TBD : TBD	-	-		-		0.000		0.235	Dec 2018	0.235	Continuing	Continuing	-
Tech Exploitation	C/TBD	TBD : TBD	-	-		-		0.000		2.060	Mar 2019	2.060	Continuing	Continuing	-
Subtotal			-	-		-		6.916		9.429		16.345	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency							Date: February 2018				
Appropriation/Budget Activity 0400 / 4			R-1 Program Element (Number/Name) PE 0604134BR / Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing				Project (Number/Name) JC / Enable Rapid Capability Delivery				
	Prior Years	FY 2017	FY 2018		FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	-	0.000		12.993	221.802	234.795	Continuing	Continuing	N/A	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JC / <i>Enable Rapid Capability Delivery</i>

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
N/A								[REDACTED]																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604134BR / <i>Counter Improvised-Threat Technology Demonstration, Prototype Development, and Testing</i>	Project (Number/Name) JC / <i>Enable Rapid Capability Delivery</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
N/A	1	2019	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605000BR / <i>*Counter Weapons of Mass Destruction Systems Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	20.690	4.479	6.241	6.163	-	6.163	4.821	5.340	5.602	5.720	Continuing	Continuing
RF: <i>Forensics Technologies</i>	20.690	4.479	6.241	6.163	-	6.163	4.821	5.340	5.602	5.720	Continuing	Continuing

Note

*Program Element 0605000BR name changes from WMD Defeat Capabilities to Counter Weapons of Mass Destruction Systems Development beginning in FY 2018.
 **Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016. This impacts these projects in PE 0602718BR and PE 0603160BR. See C. Other Program Funding Summary below.

A. Mission Description and Budget Item Justification

The Counter Weapons of Mass Destruction (WMD) Systems Development program element supports the development and demonstration of verification and monitoring technologies and systems for the Countering Weapons of Mass Destruction (CWMD) mission. This funding specifically supports International Monitoring System technology requirements under the Nuclear Arms Control Technology (NACT) program. Through FY 2014, funding also supported the development of collaborative CWMD analysis capabilities between the Department of Defense and key interagency and international partners through a globally accessible net-centric framework in the form of the Integrated Weapons of Mass Destruction Toolset.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	4.568	6.241	6.216	-	6.216
Current President's Budget	4.479	6.241	6.163	-	6.163
Total Adjustments	-0.089	0.000	-0.053	-	-0.053
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.089	-			
• Economic Assumptions	-	-	-0.053	-	-0.053

Change Summary Explanation

The funding level in this program element continues to reflect the impact of incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RF: <i>Forensics Technologies</i>	20.690	4.479	6.241	6.163	-	6.163	4.821	5.340	5.602	5.720	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the development of verification and monitoring capabilities for the Defense Threat Reduction Agency (DTRA) to counter proliferation and weapons of mass destruction (WMD). DTRA's Nuclear Arms Control Technologies (NACT) program performs Research, Development, Test, and Evaluation (RDT&E) to improve the sustainability, reliability, and effectiveness of capabilities related to its operational mission to install, operate, maintain, and sustain the waveform and radionuclide nuclear detonation detection stations comprising the U.S. portion of the International Monitoring System (IMS). This delivers data to the U.S. monitoring and verification community and enables U.S. compliance with the Comprehensive Nuclear Test Ban Treaty (CTBT) in support of U.S. and Department of Defense (DoD) nonproliferation objectives.

The project addresses WMD monitoring, implementation of, and compliance with arms control agreement requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology, and Logistics. This project conforms to the administration's research and development priorities related to WMD arms control and disablement. Technical assessments are made against CTBT implementation requirements and U.S. objectives to provide the basis for sound project development, evaluate existing programs, provide data required to inform compliance assessments, and support U.S. monitoring policy, decision-makers, and negotiation teams.

The primary RDT&E program emphasis is on improvements that enable the installation of treaty-specific stations, which reduce costs and increase the reliability in diverse and often harsh environments; improve efficiency, performance, reliability, and sustainability of existing stations and treaty-specified verification capabilities; and improve capabilities to detect, characterize, and enable discrimination of, nuclear weapons tests. The NACT program directly supports U.S. and allied warfighter and national technical monitoring requirements and provides vital data used by the treaty monitoring community, warfighter planners, DoD, other U.S. Government agencies, and international agencies.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RF - Forensics Technologies	4.479	6.241	6.163
Description: Project RF supports the NACT Program, conducting RDT&E to meet IMS technology requirements in support of CTBT implementation, compliance, monitoring, inspection, and other emerging nuclear arms control activities.			
FY 2018 Plans:			
- Continue the optimization of IMS technology and operations to comply with CTBT language and evolving operational manual requirements in order to increase efficiencies, sustainability and cost effectiveness.			
- Conduct testing and evaluation of waveform station components and systems at the Facility for Acceptance, Calibration, and Testing site as a demonstration in a relevant environment.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue development of improved state of health monitoring software for use on radionuclide stations to provide a predictive indication of pending failures and required maintenance. - Establish a Radionuclide Test-bed capability for rapid resolution of system faults. - Participate in international/interagency- sponsored technology development exchanges to leverage expertise and to provide synergy for R&D activities. - Continue to conduct field testing on High Reliability Power Sources for arctic operational environments. - Conduct Entry-into-Force Readiness, Rapid Response risk assessment tools, and conduct Operational Tabletop Exercises in order to quantify operational risks and the costs of mitigation costs. - Advance the “state of health” performance monitoring capabilities for waveform and radionuclide stations to increase reliability, sustainability, and cost effectiveness. - Evaluate infrasound sensors for use at IMS stations - Evaluate the implementation of a standard configuration for the Central Recording Facility for use at IMS stations - Continue the sustainment of the Radionuclide Lab (RL16) at Pacific Northwest National Laboratory in support of the CTBT. <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Implement use of IMS infrastructure to provide data in support DoD and interagency nuclear-event response missions in order to enhance National Technical Nuclear Forensics (NTNF) and consequence management mission capabilities. - Integrate IMS into appropriate DoD and interagency exercises to ensure stakeholder involvement in system optimization and to leverage, to the fullest extent possible, all IMS data streams in informing partner exercise activities. - Analyze technical requirements for the addition of capabilities within the IMS infrastructure that will support nuclear-event response. - Advance nuclear treaty monitoring capabilities to higher technology readiness levels to establish a resilient, multi-mission, and state-of-the-art IMS capability. - Leverage conventional high-explosive testing events in order to increase opportunities to evaluate U.S. IMS performance. - Participate in CTBT Organization Provisional Technical Secretariat international/interagency- sponsored technology development exchanges to leverage expertise and to provide synergy for R&D activities. <p>FY 2018 to FY 2019 Increase/Decrease Statement: No significant change.</p>			
Accomplishments/Planned Programs Subtotals	4.479	6.241	6.163

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	9.176	10.274	10.257	-	10.257	10.466	10.675	10.894	11.123	Continuing	Continuing
• 27/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	36.738	40.286	33.578	-	33.578	32.973	33.668	34.371	35.094	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assess government, academic, and industrial performers and make selections based upon a "best fit for task" criteria. Common government awardees include DoD Service Laboratories and the Department of Energy National Laboratories.

E. Performance Metrics

The goal of the NACT RDT&E program is to enable full compliance of all emerging data availability/data quality requirements and other operational requirements as documented in nuclear CTBT treaty requirements, nuclear-event response requirements, language, CTBT-issued Radionuclide and Waveform Operations Manuals, other CTBT Organization communications, and DoD Treaty Implementation Manager directives. The IMS data availability/timeliness performance specifications are currently 98% data availability for IMS waveform and 95% for IMS radionuclide systems. The data quality specifications are various data metrics that allow accurate time, location, and yield estimation of a nuclear event. RDT&E is conducted in support of the NACT's operational mission to operate, maintain, and sustain the Provisional Technical Secretariat certified waveform and radionuclide CTBT IMS monitoring stations and radionuclide laboratory in accordance with CTBT requirements at the lowest cost. CTBT IMS data availability/timeliness performance specifications are currently 98% data availability for IMS waveform and 95% for IMS radionuclide systems. Data quality metrics continue to evolve as the entire CTBT IMS capability is exercised and tested.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Radionuclide sensor, station, laboratory and network improvements	FFRDC	Pacific Northwest National Laboratory : Richland, WA	5.118	0.833	Feb 2017	1.575	Jan 2018	1.550	Jan 2019	-		1.550	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements; validation and verification testing	FFRDC	Sandia National Laboratory : Albuquerque, NM	4.660	0.934	Jan 2017	1.550	Jan 2018	1.850	Jan 2019	-		1.850	Continuing	Continuing	-
Radionuclide sensor, station, and network improvements	MIPR	Air Force Technical Application Center : Patrick AFB, FL	2.400	0.230	Nov 2016	0.370	Nov 2017	0.250	Nov 2018	-		0.250	Continuing	Continuing	-
Engineering & Technical Services	C/CPFF	Engility Corp : Chantilly, VA	1.986	-		-		-		-		-	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements	C/CPFF	Dynetics, Inc : Arlington, VA	1.828	-		-		-		-		-	Continuing	Continuing	-
Radionuclide sensor, station, laboratory and network improvements	C/CPFF	General Dynamics Misson Systems, Inc. : Fairfax, VA	1.446	0.602	Sep 2017	0.460	Dec 2017	0.431	Nov 2018	-		0.431	Continuing	Continuing	-
Station, and network Improvements	C/CPFF	Leidos Innovations Corp. : Alexandria, VA	0.374	0.092	Dec 2016	0.300	Apr 2018	0.200	Apr 2019	-		0.200	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements	C/CPFF	Pennsylvania State University : State College, PA	0.322	0.480	May 2017	0.332	Jan 2018	0.200	Jan 2019	-		0.200	Continuing	Continuing	-
Station failure and logistics modeling and simulation	C/CPFF	Systems Exchange, Inc. : Carmel, CA	0.235	0.039	Jul 2017	0.039	Jul 2018	-		-		-	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements	MIPR	Naval Research Laboratory : Washington DC	0.204	-		-		0.200	Jan 2019	-		0.200	Continuing	Continuing	-
EIF Readiness Planning	C/CPFF	Alion Science and Technology Corp. : McLean, VA	0.200	0.100	Sep 2017	-		0.100	Jan 2019	-		0.100	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies
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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Radionuclide sensor, station, laboratory and network improvements	C/CPFF	Raytheon Company : Dulles, VA	0.200	-		-		-		-		-	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements	C/CPFF	University of Alaska Fairbanks : Fairbanks, AK	0.190	0.140	Mar 2017	0.129	Mar 2018	0.129	Mar 2019	-		0.129	Continuing	Continuing	-
IMEA Software Development	C/CPFF	Applied Research Associates, Inc. : Alexandria, VA	-	-		0.200	Dec 2017	0.200	Dec 2018	-		0.200	Continuing	Continuing	-
IMS Gas Background Analysis	FFRDC	Argonne National Laboratory : Argonne, IL	-	-		0.130	Apr 2018	0.100	Apr 2019	-		0.100	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements; validation and verification testing	C/TBD	TBD : TBD	-	-		0.398	May 2018	0.295	May 2019	-		0.295	Continuing	Continuing	-
Seismic and Infrasound sensor, station, and network Improvements	MIPR	US Army Corps of Engineers : Vicksburg, MS	-	0.032	Aug 2017	0.200	Mar 2018	0.100	Dec 2018	-		0.100	Continuing	Continuing	-
Subtotal			19.163	3.482		5.683		5.605		-		5.605	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS Support to Program Office	C/CPFF	Engility Corp. : Chantilly, VA	0.600	0.426	Dec 2016	0.446	Dec 2017	0.446	Dec 2018	-		0.446	Continuing	Continuing	-
A&AS Support to Program Office	MIPR	OUSD AT&L : Arlington, VA	0.470	0.478	Jul 2017	-		-		-		-	Continuing	Continuing	-
Travel	Reqn	Various : Ft. Belvoir, VA	0.457	0.093	Nov 2016	0.112	Nov 2017	0.112	Nov 2018	-		0.112	Continuing	Continuing	-
Subtotal			1.527	0.997		0.558		0.558		-		0.558	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Defense Threat Reduction Agency							Date: February 2018				
Appropriation/Budget Activity 0400 / 5			R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development				Project (Number/Name) RF / Forensics Technologies				

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.690	4.479	6.241	6.163	-	6.163	Continuing	Continuing	N/A

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) RF / Forensics Technologies

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NACT				
Optimize and improve IMS seismic, infrasound, and radionuclide sensors: infrasound calibration standards, procedures, instrumentation	2	2017	4	2020
Optimize and improve IMS seismic, infrasound, and radionuclide sensors: automated seismic calibration process	2	2017	4	2018
Optimize and improve IMS seismic, infrasound, and radionuclide sensors: radionuclide system improvements to address detection limits and cost effectiveness	1	2017	4	2020
Optimize and improve IMS station performance: validation and verification testing of RDTE concepts to enable operational implementation	1	2017	1	2023
Provide analysis of 800 additional nuclear material samples for treaty verification purposes	1	2017	1	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Defense Threat Reduction Agency **Date:** February 2018

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>					PE 0605502BR / <i>Small Business Innovation Research</i>							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	49.085	10.456	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
RA: <i>Information Sciences and Applications</i>	49.085	10.456	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

Funding for this program element is not allocated until the year of execution. Program Element 0605502BR "Small Business Innovative Research" is used in reporting year-end actual expenses only.

A. Mission Description and Budget Item Justification

The Small Business Innovative Research (SBIR) and the Small Business Technology Transfer (STTR) programs provide the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	10.456	0.000	0.000	-	0.000
Total Adjustments	10.456	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	10.456	-			

Change Summary Explanation

Funding for the SBIR Program is consolidated in this Program Element during the year of execution.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502BR / <i>Small Business Innovation Research</i>				Project (Number/Name) RA / <i>Information Sciences and Applications</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
RA: <i>Information Sciences and Applications</i>	49.085	10.456	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

*Funding is not allocated until the year of execution. Program Element 0605502BR "Small Business Innovative Research (SBIR)" is used in reporting year-end actual expenses only.

A. Mission Description and Budget Item Justification

The Small Business Innovative Research (SBIR) and the Small Business Technology Transfer (STTR) programs provide the means for stimulating technological innovation in the private sector and strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs. These programs foster and encourage participation of minority and disadvantaged businesses in technological innovation and increase the commercial application of DoD supported research and development results. These efforts are responsive to Public Law 106-554 Small Business Act (15 U.S.C. 638).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: RA: Information Sciences and Applications	10.456	-	-
Description: This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.			
Accomplishments/Planned Programs Subtotals	10.456	-	-

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	35.048	30.270	31.830	-	31.830	29.977	30.167	30.412	31.270	Continuing	Continuing
• 27/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	18.102	10.229	11.286	-	11.286	11.480	11.742	12.005	12.258	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Defense Threat Reduction Agency		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502BR / <i>Small Business Innovation Research</i>	Project (Number/Name) RA / <i>Information Sciences and Applications</i>

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



The Joint Staff

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Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation -----	FY 2017 (Base + OCO)	FY 2018	FY 2018	FY 2018	FY 2018
		PB Request with CR Adj Base	Total PB Requests* with CR Adj Base	PB Request with CR Adj OCO	Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	66,555	116,141	116,141		
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation	FY 2018		FY 2018		FY 2018	
	FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW				116,141		116,141
Total Research, Development, Test & Evaluation				116,141		116,141

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	128,287		128,287
Total Research, Development, Test & Evaluation	128,287		128,287

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Department of Defense
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 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Component Development And Prototypes	23,630	23,638	23,638		
Management Support	39,063	89,466	89,466		
Operational System Development	3,862	3,037	3,037		
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		
<u>Summary Recap of FYDP Programs</u>					
General Purpose Forces	8,498	10,749	10,749		
Intelligence and Communications	857	673	673		
Research and Development	56,374	60,219	60,219		
Training Medical and Other		44,500	44,500		
Administration and Associated Activities	826				
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

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	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>					
Advanced Component Development And Prototypes			23,638		23,638
Management Support			89,466		89,466
Operational System Development			3,037		3,037
Total Research, Development, Test & Evaluation			116,141		116,141
<u>Summary Recap of FYDP Programs</u>					
General Purpose Forces			10,749		10,749
Intelligence and Communications			673		673
Research and Development			60,219		60,219
Training Medical and Other			44,500		44,500
Administration and Associated Activities					
Total Research, Development, Test & Evaluation			116,141		116,141

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total

Advanced Component Development And Prototypes	22,435		22,435
Management Support	102,815		102,815
Operational System Development	3,037		3,037
Total Research, Development, Test & Evaluation	128,287		128,287
Summary Recap of FYDP Programs			

General Purpose Forces	9,695		9,695
Intelligence and Communications	652		652
Research and Development	75,000		75,000
Training Medical and Other	42,940		42,940
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	128,287		128,287

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Defense-Wide
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 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Component Development And Prototypes	23,630	23,638	23,638		
Management Support	39,063	89,466	89,466		
Operational System Development	3,862	3,037	3,037		
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		
<u>Summary Recap of FYDP Programs</u>					
General Purpose Forces	8,498	10,749	10,749		
Intelligence and Communications	857	673	673		
Research and Development	56,374	60,219	60,219		
Training Medical and Other		44,500	44,500		
Administration and Associated Activities	826				
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Advanced Component Development And Prototypes				23,638		23,638
Management Support				89,466		89,466
Operational System Development				3,037		3,037
Total Research, Development, Test & Evaluation				116,141		116,141
<u>Summary Recap of FYDP Programs</u>						
General Purpose Forces				10,749		10,749
Intelligence and Communications				673		673
Research and Development				60,219		60,219
Training Medical and Other				44,500		44,500
Administration and Associated Activities						
Total Research, Development, Test & Evaluation				116,141		116,141

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(Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total

Advanced Component Development And Prototypes	22,435		22,435
Management Support	102,815		102,815
Operational System Development	3,037		3,037
Total Research, Development, Test & Evaluation	128,287		128,287
 Summary Recap of FYDP Programs			

General Purpose Forces	9,695		9,695
Intelligence and Communications	652		652
Research and Development	75,000		75,000
Training Medical and Other	42,940		42,940
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	128,287		128,287

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Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
The Joint Staff	66,555	116,141	116,141		
Total Research, Development, Test & Evaluation	66,555	116,141	116,141		

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Defense-Wide
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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
The Joint Staff				116,141	116,141
Total Research, Development, Test & Evaluation				116,141	116,141

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Total Obligational Authority
(Dollars in Thousands)

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Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
The Joint Staff	128,287		128,287
Total Research, Development, Test & Evaluation	128,287		128,287

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,630	23,638	23,638			U
		Advanced Component Development And Prototypes		23,630	23,638	23,638			
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,744	36,581	36,581			U
172	0204571J	Joint Staff Analytical Support	06	5,462	7,712	7,712			U
175	0303166J	Support to Information Operations (IO) Capabilities	06	857	673	673			U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06		44,500	44,500			U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06						U
		Management Support		39,063	89,466	89,466			
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,036	3,037	3,037			U
245	0902298J	Management HQ - OJCS	07	826					U
		Operational System Development		3,862	3,037	3,037			
Total Research, Development, Test & Eval, DW				66,555	116,141	116,141			

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04				23,638		23,638	U
		Advanced Component Development And Prototypes					23,638		23,638	
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06				36,581		36,581	U
172	0204571J	Joint Staff Analytical Support	06				7,712		7,712	U
175	0303166J	Support to Information Operations (IO) Capabilities	06				673		673	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				44,500		44,500	U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06							U
		Management Support					89,466		89,466	
196	0208043J	Planning and Decision Aid System (PDAS)	07				3,037		3,037	U
245	0902298J	Management HQ - OJCS	07							U
		Operational System Development					3,037		3,037	
Total Research, Development, Test & Eval, DW							116,141		116,141	

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	22,435		22,435	U
		Advanced Component Development And Prototypes		22,435		22,435	
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	52,565		52,565	U
172	0204571J	Joint Staff Analytical Support	06	6,658		6,658	U
175	0303166J	Support to Information Operations (IO) Capabilities	06	652		652	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06	42,940		42,940	U
		Management Support		102,815		102,815	
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,037		3,037	U
245	0902298J	Management HQ - OJCS	07				U
		Operational System Development		3,037		3,037	
Total Research, Development, Test & Eval, DW				128,287		128,287	

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The Joint Staff
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 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,630	23,638	23,638			U
		Advanced Component Development And Prototypes		23,630	23,638	23,638			
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,744	36,581	36,581			U
172	0204571J	Joint Staff Analytical Support	06	5,462	7,712	7,712			U
175	0303166J	Support to Information Operations (IO) Capabilities	06	857	673	673			U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06		44,500	44,500			U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06						U
		Management Support		39,063	89,466	89,466			
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,036	3,037	3,037			U
245	0902298J	Management HQ - OJCS	07	826					U
		Operational System Development		3,862	3,037	3,037			
Total The Joint Staff				66,555	116,141	116,141			

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The Joint Staff
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04				23,638		23,638	U
		Advanced Component Development And Prototypes					23,638		23,638	
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06				36,581		36,581	U
172	0204571J	Joint Staff Analytical Support	06				7,712		7,712	U
175	0303166J	Support to Information Operations (IO) Capabilities	06				673		673	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				44,500		44,500	U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06							U
		Management Support					89,466		89,466	
196	0208043J	Planning and Decision Aid System (PDAS)	07				3,037		3,037	U
245	0902298J	Management HQ - OJCS	07							U
		Operational System Development					3,037		3,037	
Total The Joint Staff							116,141		116,141	

R-119PB: FY 2019 President's Budget (Published Version), as of January 26, 2018 at 13:09:26

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The Joint Staff
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se
103	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	22,435		22,435	U
		Advanced Component Development And Prototypes		22,435		22,435	
144	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	52,565		52,565	U
172	0204571J	Joint Staff Analytical Support	06	6,658		6,658	U
175	0303166J	Support to Information Operations (IO) Capabilities	06	652		652	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06				U
184	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - non-MHA	06	42,940		42,940	U
		Management Support		102,815		102,815	
196	0208043J	Planning and Decision Aid System (PDAS)	07	3,037		3,037	U
245	0902298J	Management HQ - OJCS	07				U
		Operational System Development		3,037		3,037	
Total The Joint Staff				128,287		128,287	

R-119PB: FY 2019 President's Budget (Published Version), as of January 26, 2018 at 13:09:26

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The Joint Staff • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
103	04	0604826J	Joint C5 Capability Development, Integration, and Interoperability Assessments.....	Volume 5 - 767

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
144	06	0605126J	Joint Integrated Air & Missile Defense Organization (JIAMDO).....	Volume 5 - 791
172	06	0204571J	Joint Staff Analytical Support.....	Volume 5 - 811
175	06	0303166J	Support to Information Operations (IO) Capabilities.....	Volume 5 - 821
183	06	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA.....	Volume 5 - 825
184	06	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA.....	Volume 5 - 845

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
196	07	0208043J	Planning and Decision Aid System (PDAS).....	Volume 5 - 869
245	07	0902298J	Management HQ - OJCS.....	Volume 5 - 871

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Program Element Table of Contents (Alphabetically by Program Element Title)

Program Element Title	Program Element Number	Line #	BA	Page
COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	0804767J	183	06.....	Volume 5 - 825
COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA	0804768J	184	06.....	Volume 5 - 845
Joint C5 Capability Development, Integration, and Interoperability Assessments	0604826J	103	04.....	Volume 5 - 767
Joint Integrated Air & Missile Defense Organization (JIAMDO)	0605126J	144	06.....	Volume 5 - 791
Joint Staff Analytical Support	0204571J	172	06.....	Volume 5 - 811
Management HQ - OJCS	0902298J	245	07.....	Volume 5 - 871
Planning and Decision Aid System (PDAS)	0208043J	196	07.....	Volume 5 - 869
Support to Information Operations (IO) Capabilities	0303166J	175	06.....	Volume 5 - 821

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0604826J <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	21.700	23.630	23.638	22.435	-	22.435	20.095	20.108	20.094	20.094	Continuing	Continuing
001: <i>C5 Assessments and Analyses</i>	10.196	12.886	12.898	11.648	-	11.648	9.308	9.321	9.307	9.307	Continuing	Continuing
002: <i>C5 Capability Development</i>	7.079	6.594	6.590	5.787	-	5.787	5.787	5.787	5.787	5.787	Continuing	Continuing
003: <i>Joint Fires C2 Interoperability</i>	4.425	4.150	4.150	5.000	-	5.000	5.000	5.000	5.000	5.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Lead command, control, communications, computers, and cyber (C5) assessments, analyses, capability development, and joint fires command and control (C2) interoperability efforts required to achieve an effective, integrated, and interoperable joint force. Efforts include C5 requirements determination, C5 architectures development and integration, C5 data standardization, joint fires C2 interoperability, and C5 integration and interoperability assessments.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	23.642	23.638	23.148	-	23.148
Current President's Budget	23.630	23.638	22.435	-	22.435
Total Adjustments	-0.012	0.000	-0.713	-	-0.713
• Congressional General Reductions	-0.012	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Economic Adjustment (inflation rate change)	-	-	-0.713	-	-0.713

Change Summary Explanation

Decrease in funding for FY 2017 due to undistributed Congressional mark to FFRDC.

Decrease in funding for FY 2019 thru FY 2023 is a result of (1) mandated 25% Major Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA and (2) changes in economic assumptions for non-fuel and non-pay inflation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>					Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
001: <i>C5 Assessments and Analyses</i>	10.196	12.886	12.898	11.648	-	11.648	9.308	9.321	9.307	9.307	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Conduct analysis and assessment activities to inform and enhance joint warfighter capabilities in support of national security requirements. Provide timely, facts-based findings and recommendations to DoD decision-making processes that validate operational requirements and apply funding to field effective, interoperable capabilities. Conduct interoperability assessments and analyses that evaluate capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5), and systems in response to operational issues and shortfalls. Conduct integration assessment efforts focused on emerging capabilities in wireless devices and security, tactical command and control and networking, satellite communications, advanced secure digital datalinks, and coalition data exchanges.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: C5 Assessments and Analyses	12.886	12.898	11.648
<p>Description: Support the Chairman's statutory requirement to advise the Secretary of Defense "on development of joint command, control, communications and cyber capability, including integration and interoperability of such capability through requirements, integrated architectures, data standards and assessments." Also supports the Chairman's focus area of improving joint warfighting capability and the SECDEF's line of effort to strengthen alliances and attract new partners. Interoperability is assessed and integrated solutions are developed to improve C5 system performance by providing recommendations based on operational architectures and evolving standards and data products. Combatant Commands, Services, agencies and coalition partners at the joint force headquarters level are provided a laboratory, exercise and assessment venue for the warfighter and capability developer to identify and solve interoperability, integration, and cyber issues with current and near-term joint and coalition capabilities.</p> <p>FY 2018 Plans: Conduct interoperability assessments and analysis in both field and persistent environments that evaluate capability and interoperability of fielded and emerging C5 systems in response to operational issues and shortfalls. FY 2018 focus areas include: capability development in command and control, mission partner environment, joint fires support, and operations in cyberspace, and joint test and evaluation of digitally aided close air support. C5 assessments and analyses activities are conducted through (1) persistent, reconfigurable C5 laboratories that connect joint and coalition system of systems operational environments to other live, virtual, and constructive environments across national and multi-national operational, research, and test networks leveraging operational venues/exercises; and (2) a deployable assessment capability (including contested joint</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>environments) that allows range instrumentation and the collection and analysis of quantitative data in replicated operational environments. Projects include:</p> <p>Coalition interoperability assurance validation (CIAV) assessments – conduct interoperability assessments of coalition systems supporting coalition mission threads. CIAV assessments validate complete and timely exchange of critical information and improve overall interoperability allowing coalition forces to fight more effectively and efficiently.</p> <p>Advanced tactical wireless integration capability – perform technical integration and assessments of advanced communication systems hardware, software, and security solutions to identify capabilities that address warfighter requirements.</p> <p>Joint fires support joint mission thread interoperability assessment – assess joint and coalition fire support command and control systems digital (machine-to-machine) interoperability and provide findings and observations.</p> <p>Advanced wide area network security capability integration – demonstrate an integrated wide area network security solution using NSA approved commercial solution for classified virtual private networks between two or more sites.</p> <p>Cyber Guard / Cyber Flag 2018 assessment and technical support – provide C2 systems, a common operational picture, and conduct assessment of cyber effects on these systems integrated into the Navy defensive cyber operation DoD Information Network (DoDIN) Simulation, Training, and Exercise Platform (STEP) environment.</p> <p>Bold Quest 2018 technical demonstration – design, build, accreditation, assessment and management of the exercise networks for U.S. and coalition partners.</p> <p>Counter-UAS (C-UAS) – data collection and analysis during RTD&E test events as well as in support of urgent operational needs in active operational theaters.</p> <p>C2 systems support to DoD Enterprise Cyber Range environment – provide a persistent and distributed cyber environment for cyber mission forces development.</p> <p>FY 2019 Plans: Conduct analysis, assessment, and integration activities to inform and enhance Joint warfighter capabilities in support of national security requirements. Provide timely, facts-based findings and recommendations for action through formal DoD decision-making processes used to validate operational requirements and apply funding to field integrated, interoperable capabilities. Conduct</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>interoperability assessments, analyses, and integration that evaluate and enhance capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5), and systems in response to operational needs and issues. Conduct integration and integration assessment efforts focused on emerging capabilities in wireless devices and security, tactical command and control and networking, satellite communications, advanced secure digital datalinks, and coalition data exchanges. Employ a deployable capability supporting the collection and analysis of decision quality data for command and control operations from the operational to lowest tactical echelons of command. Joint analysis supports capability development, acquisition, and systems employment decisions based on quantifiable performance in both actual and replicated operational environments. Projects include:</p> <p>Coalition Interoperability and Assurance Validation (CIAV) – CIAV assessments of US and coalition systems support in-theater operations by ensuring C5 system adequacy before their operational employment in the Afghan and Iraq areas of operations. CIAV is also increasing efforts in the Pacific. CIAV assessments validate complete and timely exchange of critical information and improve interoperability, enabling coalition forces to fight more effectively and efficiently.</p> <p>Classified reconfigurable operational wireless network – the integration, employment, and assessment of a single, rapidly deployed and configurable wireless network that carries multiple classifications. Network is suitable for tactical field settings, temporary installations, and fixed headquarters thereby addressing tactical, operational, and strategic requirements. Employs National Security Agency approved communications security and provides secure communications faster with less hardware and overhead.</p> <p>Joint fires support joint mission thread interoperability assessment – assess joint and coalition fire support command and control systems digital (machine-to-machine) interoperability and provide findings and observations.</p> <p>Advanced tactical cellular (4G/LTE) integration – multiple efforts to increase the availability of 4G/LTE to tactical forces. Addresses communications security, smart-phone battlefield apps, and 4G/LTE survivability in contested and austere environments.</p> <p>Bold Quest (BQ) 2019 coalition interoperability demonstrations – support the design, plan, and execution of the BQ events which address close air support, counter UAS, IFF testing, and cyber effects on operations for U.S. forces and coalition partners. Support includes accredited exercise networks, associated C2 systems, and data collection and analysis capabilities.</p> <p>Joint expeditionary integration capabilities – integrate, refine, and accelerate the migration of Special Operating Forces (SOF) battle-proven capabilities to general purpose forces in accordance with governing instructions. Rapid migration of SOF “best</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>practices” provides greater capability to general purpose forces and enhances interoperability with SOF and coalition partners. The capabilities include integrated secure radio networks, tactical data links, tactical cellular, enroute satellite communications, enhanced situational awareness, fratricide prevention, and a more efficient kill-chain.</p> <p>Battlefield intelligence trusted network environment – the integration and assessment of an enterprise environment featuring a single, aggregated intelligence sharing capability for multiple partner nations that does not compromise respective national networks or domains.</p> <p>Joint Planning Services (JPS) – operational assessment of the JPS pilot will determine if the combatant commanders and Service operational planning requirements would be met by JPS. JPS is intended to enable planners to develop and maintain complex strategic/contingency plans in a dispersed, collaborative, cross-functional joint, interagency, intergovernmental, multinational environment. JPS should also provide rapid access to authoritative, geospatially-enabled planning data and tools and efficient and expeditious information dissemination.</p> <p>Mode 5 analysis – Plan and execute analysis events at various live venues (such as RED FLAG or BOLD QUEST) in support of certification of Service Mode 5 IFF capabilities.</p> <p>USCENTCOM counter-UAS (C-UAS) support – Conduct analysis activities both at CONUS C-UAS events and in active operational theaters to evaluate effectiveness of rapidly fielded C-UAS systems. Results will inform follow-on fielding and rapid procurement decisions.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Decrease in funding for FY 2019 is a result of mandated 25% Major Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA and revised economic assumptions (inflation rate change).</p>			
Accomplishments/Planned Programs Subtotals	12.886	12.898	11.648

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort and Acquisition Strategy.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>
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The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.

E. Performance Metrics

1. Conduct a minimum of 15 interoperability assessments designed to identify joint and coalition interoperability issues and recommend solutions to program managers, Combatant Commands, Services, and agencies.
2. Conduct a minimum of one broad-spectrum Counter-UAS (C-UAS) analysis event; providing data collection, analysis, and recommendations that directly address identified C-UAS capability gaps and interoperability shortfalls for partners including: Joint, Services, intergovernmental, and coalition stakeholders.
3. Provide C2 systems and persistent command, control, communications, and computers (C4) environment supporting at least two Combatant Command exercises to satisfy Combatant Command training objectives, including the cyber threat to mission systems.
4. Support up to four Squad-X experiment events, providing objective analysis on performance and interoperability that directly informs the acquisition of improved C2 capabilities for U.S. small units.
5. Support a minimum of 30 coalition interoperability assurance and validation events and provide a minimum of 100 observations/findings to resolve end-to-end mission based interoperability issues, validate tactics, techniques, and procedures, and support NATO future mission networking (FMN) and U.S. mission partner environment (MPE) plans.
6. Provide analyses for at least six field assessments/demonstrations in the areas of joint fires, C2, coalition intelligence, surveillance, and reconnaissance (CISR), digitally aided close air support (DACAS), FMN and MPE. Analyses results will inform continued development of evaluated capabilities, including acquisition/fielding decisions and tactics, techniques and procedures.
7. Provide C2 Systems and persistent C4 environment supporting at least four individual or team training events per year to meet cyber training and certification objectives.
8. Provide C2 Systems and Persistent C4 Environment to support at least four cyber assessments promoting cyber capability development.
9. Integrate at least two new capabilities per year supporting Combatant Command, Service, agency, and commercial solutions for classified and mobile computing program requirements.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Joint C5I																												
C5 Assessments and Analyses																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Joint C5I				
C5 Assessments and Analyses	1	2019	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>					Project (Number/Name) 002 / <i>C5 Capability Development</i>		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
002: <i>C5 Capability Development</i>	7.079	6.594	6.590	5.787	-	5.787	5.787	5.787	5.787	5.787	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

C5 capability development functions as the DoD requirements lead for the joint command and control (C2) family of programs and requirements lead for mission partner environment (MPE); developer of joint C4 architectures, joint common systems functions, joint mission threads, lead in analysis and review of architectures and standards in joint capability development systems to ensure integration and interoperability; enable warfighter access to authoritative data sources and improve data interoperability by establishing common C2 data and service standards.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: C5 Capability Development	6.594	6.590	5.787
Description: Lead C2 capability development and integration in order to achieve an interdependent joint force. Supports Chairman's focus of improving joint warfighter capability. This will be accomplished through four focus areas: capability development, C4 architectures, data and services, and interoperability and integration.			
FY 2018 Plans: Capability Development – oversee requirements management for the Department’s joint command and control (C2) family of programs. Utilize the net-enabled requirements identification database and the decision support tool to provide accessibility and visibility into C2 capability needs and potential solutions for C2 stakeholders. Analyze/coordinate the Department’s 2020-2024 C2 integrated priority lists and capability gap assessment for JROC approval. Develop/coordinate annual joint C2 FY 2019 and FY 2020 operational priorities for JROC approval, and host four Joint C2 integration workshops to better integrate DoD strategic guidance, validated requirements, operational priorities, and materiel development. Align capability requirements and JCIDS documentation to enable material solution development, and ensure warfighter equities are represented through Joint C2 governance and management forums and formal processes. Chair the newly established Global Command and Control System-Joint Enterprise (GCCS-JE) Requirements Governance Board on behalf of the JROC to oversee the execution of requirements and management of capability development. Develop capability definition packages and capability packages to support on-going enterprise Common Operational Picture (COP) GCCS-JE development, command and control information exchange environment (C2IE), cyber C2, and joint planning services capabilities, and develop warfighter assessment criteria for these capabilities. Continue to co-chair DoD’s C2 Council of Colonels and update CJCSI/M 3265.01, “Joint C2 Governance and Management,” to strengthen			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>requirements management for enterprise-level, globally integrated operations. Ensure requirements development efforts include architecture, data, cross-functional, cyber, mission partner environment and joint information environment capability areas and equities. Implement plans and schedules to assess Enterprise COP GCCS-JE incrementally developed capabilities.</p> <p>C4 Architectures - Provide architecture and joint mission thread development and analysis to support the Chairman's directed focus areas, specifically in areas of joint command and control, cyberspace, and joint and coalition interoperability. Provide architectures and analytical support as required to the Chairman's Joint Military Net Assessment. Conduct analysis and validate architectures, functional requirements documents and engineering designs that support implementation of the joint information environment. Refine the joint common systems function list to support JCIDS and system/service development. Analyze JCIDS capability requirements documents and architectures for integration, interoperability, performance, cost and schedule. Update the warfighter mission area (WMA) architecture development standards to meet emerging JCIDS process improvements. Provide architecture integration and federation to support the WMA enterprise architecture by populating the WMA architecture portal with all relevant and available Functional Capabilities Board portfolio areas of interest architecture content. Improve the WMA architecture portal for the Combatant Command, Services and DoD agencies by broadening access, integration, reusability and information sharing of architecture artifacts and data sets through federation and standardized information and data exchanges.</p> <p>Data and Services – continue to develop, promote, and integrate data and services requirements, standards, technical specifications, and policy to support improved warfighter interoperability and information sharing with joint, mission partners and other U.S. Government departments and agencies. Socialize and perform proof of concept activities of the NATO core data framework, to achieve coalition interoperability and demonstrate operational effectiveness. Continue to align and standardize emerging tactical data link and messaging standards with enterprise information sharing. Support the implementation of National Information Exchange Model (NIEM) as the common interoperability information exchange standard for new IT services. In coordination with the DoD CIO, implement IT enterprise service lifecycle management processes, procedures, and capabilities.</p> <p>Interoperability and Integration – lead mission partner environment (MPE) implementation and support cyber priorities across DoD by performing analysis, conducting assessments and supporting materiel developers. Review and monitor the continued development of the MPE information system to ensure it meets the operational requirements of the CCMDs and Services and complements the greater MPE initiative. Continue to shape NATO future mission networking implementation to ensure it remains aligned with MPE, including related capability development. Support development and maturation of DOD enterprise cyber-range environment and command and control information systems to support US and coalition cyber force readiness, cyber defense of coalition networks, integration, interoperability, and defensibility of mission partner environment federated networks.</p> <p>FY 2019 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Capability Development – analyze and coordinate the Department’s FY 2021-2025 C2 integrated priority lists and capability gap assessment for JROC approval. Develop and coordinate annual Joint C2 FY 2020 and FY 2021 operational priorities for JROC approval. Provide operational input to capability development efforts focused on migration of Global Command and Control Systems (GCCS) to a loosely coupled enterprise accessible solution. Ensure warfighter demands for a functional denied-disconnected, intermittent, low-bandwidth capability at the Combined/Joint Task Force-level are adequately understood and addressed by the capability developer. Ensure capability needs are addressed for C2IE development and transition.</p> <p>Provide architecture and joint mission thread development and analysis efforts as required to support the Chairman's directed focus areas and Chief Information Officer (CIO) lines of operations. Provide architectures and analytical support as required to the Chairman's Joint Military Net Assessment. Conduct analysis and validate architectures and engineering designs for continued implementation of the joint information environment. Update the warfighter mission area (WMA) architecture development standards to improve WMA architecture portal usability. Continue to improve the quality of and expand the amount of the C4/ Cyber portfolio architecture information available on the WMA architecture portal. Conduct analyses and develop architectures and metrics for JCIDS capability requirement documents.</p> <p>Data and Services – develop, promote, and integrate warfighter data and services requirements, standards, technical specifications, and policy to improve warfighter interoperability and information sharing with joint, mission partners, and other U.S. government departments and agencies. Perform and lead proof of concept activities of the North Atlantic Treaty Organization (NATO) core data framework and the National Information Exchange Model (NIEM) with selected communities of interest, such as robotics and autonomous systems, to achieve coalition interoperability and demonstrate operational effectiveness for the mission partner environment and for the federated mission networking domain. Continue to align and standardize emerging tactical data link, symbology (including cyber symbology) and messaging standards with enterprise information sharing. Support and guide the maturation of and implementation of NIEM in the interagency, joint and coalition domains as the common enterprise level interoperability information exchange standard for new and updated IT services. In coordination with the DoD CIO, implement IT enterprise service management processes and procedures including lifecycle management, enterprise level capability integration and operational data management. Support joint command and control governance and requirements documents development to ensure data and service equities are properly represented on behalf of the warfighter.</p> <p>Integration and interoperability – lead mission partner environment (MPE) implementation and support cyber priorities across DoD by performing analysis, conducting assessments and supporting materiel developers. Review and monitor the continued development of the MPE information system to ensure it meets the operational requirements of the Combatant Commands and Services and complements the greater MPE initiative. Continue to shape NATO future mission networking implementation to ensure it remains aligned with MPE, including related capability development. Support development and maturation of</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
DOD enterprise cyber-range environment command and control information system to support US and coalition cyber force readiness, cyber defense of coalition networks, integration, interoperability, and defensibility of mission partner environment federated networks. Coordinate and lead non-overseas contingency operations-funded coalition interoperability events across the geographic Combatant Commands. <i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Decrease of \$803K due to the transfer of funding to Joint Fires project to support the Bold Quest multinational network enhancement which greatly increases Bold Quest distributed operations, both within CONUS and in Europe and Australia.			
Accomplishments/Planned Programs Subtotals	6.594	6.590	5.787

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort, and Acquisition Strategy.

The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.

E. Performance Metrics

1. Secure JROC approval of the Global Command and Control System-Joint Enterprise (GCCS-JE) Information Systems Capability Development Document (IS-CDD) to guide development of DoD's primary situational awareness capability.
2. Secure JROC approval of the FY 2019 and FY 2020 joint C2 operational priorities defining C2 capability needs/gaps providing senior level oversight and direction to joint C2 capability development.
3. Secure DoD approval for seven JCIDS requirements documents to support materiel development of Joint C2, GCCS-JE, planning and execution, intelligence support to C2, global-theater security cooperation, readiness, and cross-functional information technology capabilities enabling timely delivery of materiel solutions to meet warfighter capability needs/gaps.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>
<p>4. Ensure Joint C2 requirements development supports the DoD-directed better buying power by continuing the rapid development and fielding of virtualized C2 system capabilities to Combatant Commands and Services.</p> <p>5. Validate the architectures and engineering design specifications for 27 JIE and MPE projects.</p> <p>6. Conduct three National Information Exchange Model Military Operations Domain Configuration Control Board sessions to improve and increase information sharing via promulgation of one domain content update.</p> <p>7. Lead a minimum of six Enterprise Service and Data Panels with the goal to improve and increase the interoperability and reusability of DOD enterprise services and authoritative data sources.</p> <p>8. Include mission partnering concepts in four Combatant Command and Service exercises.</p> <p>9. Establish at least two new or enhanced information/sharing and collaboration areas NLT 30 Jun 19.</p> <p>10. Establish and refine processes and procedures to ensure FMN implementation is included in two NATO exercises.</p>		

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
C5 Capability Development																												
C5 Capability Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
C5 Capability Development				
C5 Capability Development	1	2019	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments	Project (Number/Name) 003 / Joint Fires C2 Interoperability
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
003: Joint Fires C2 Interoperability	4.425	4.150	4.150	5.000	-	5.000	5.000	5.000	5.000	5.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Lead interoperability efforts across DoD and partner nations at the operational and tactical level for mission partner operations, fire support, combat identification (CID), and friendly force tracking (FFT) capabilities. Conduct joint fire support, joint close air support and CID-FFT action plans to fulfill CJCS-directed, General Officer/Flag Officer (GOFO) level responsibilities. Conduct Joint Fire Support Executive Steering Committee (JFS ESC) standardization team accreditation visits to U.S. and partner nation schoolhouses to ensure memorandum of agreement signatories are accomplishing schoolhouse training in compliance with the memoranda.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Joint Fires C2 Interoperability</p> <p>Description: These efforts directly support Chairman, Joint Chiefs of Staff (CJCS) guidance to increase interoperability with allies and partners, to more effectively counter transregional threats. Supports Chairman's focus area of improving joint warfighting capability and the SECDEF's line of effort to stengthen alliances and attract new partners. Execute Joint Staff-sponsored Bold Quest systems-of-systems interoperability assessment, including integration of cyber capabilities with command and control of conventional and Special Operations Force missions from a multinational perspective at the tactical level. Lead the Joint Fire Support Executive Steering Committee (JFS ESC), composed of Flag/General Officer representatives and supporting staffs from the U.S. Services, Special Operations Command and 21 partner nations. Those nations include NATO nations, Australia, Republic of Korea and key Gulf State allies. Also lead the Combat Identification – Friendly Force Tracking Executive Steering Committee (CID-FFT ESC), focused on more effective and efficient combat operations and reduced potential for friendly fire incidents.</p> <p>FY 2018 Plans: Plan and execute Joint Staff-sponsored Bold Quest 2018 systems-of-systems interoperability assessment, including integration of Cyber and ISR capabilities with command and control of conventional and Special Operations Force missions from a multinational perspective at the tactical level. These efforts directly support the National Military Strategy and other CJCS focus areas. Continue leading accreditation visits of current JFS ESC member programs and provided staff assistance for development of close air support-related training and certification programs.</p> <p>FY 2019 Plans: Plan and execute Joint Staff-sponsored Bold Quest 2019 capability demonstration and assessment, focused on interoperability for joint and coalition fires. Bold Quest data and assessments inform US and Partner Nation investment in multiple capability</p>	4.150	4.150	5.000

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>areas: combat identification, friendly force tracking, digitally aided close air support and fires, integrated air and missile defense, coalition intelligence surveillance and reconnaissance, and cyber. These efforts directly support the National Military Strategy, the CJCS' global integration objectives and the Combatant Commanders conventional and SOF international engagement programs. Continue leading accreditation visits of current JFS ESC member programs and provided staff assistance for development of close air support-related training and certification programs.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Increase of \$850K due to the Bold Quest multinational network enhancement which greatly increases Bold Quest distributed operations, both within CONUS and in Europe and Australia.</p>			
Accomplishments/Planned Programs Subtotals	4.150	4.150	5.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort and Acquisition Strategy.

The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.

E. Performance Metrics

1. Lead development, demonstration and assessment of situational awareness and cooperative/non-cooperative identification capabilities that enable U.S. and NATO/Coalition warfighters to identify friendly, enemy, and neutral forces for "shoot/don't shoot" decisions.
2. Synchronize Service testing, acquisition and fielding of Mode 5 IFF capability, with focus on Full Operational Capability (FOC) in 2020. Monitor Service fielding progress of 169 platform types.
3. Lead the design, planning and execution of two Bold Quest coalition capability demonstrations and assessments in order to inform U.S. and partner nation investment in networked capabilities to improve the detection and engagement of targets via surface (ground and maritime) and air delivered fires and other non-kinetic means.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>
<p>4. Lead the digitally aided close air support (DACAS) coordinated implementation initiative among all US Services, USSOCOM, and 16 partner nations; develop and document engineering change proposals' technical solutions to operational interoperability issues in the CAS mission area; maintain the associated equipment and currency of assessment tools software and licensing agreements.</p> <p>5. Lead US and partner nations with international fire support interoperability capability development initiatives, to ensure on-going efforts optimize: unity-of-effort; resource/cost benefit; and enhanced fire support integration.</p> <p>6. Expand digital call-for-fire solution development to include enhanced multi-national interoperability with 11 partner nations.</p> <p>7. Lead, coordinate, organize, and execute an annual Joint Fire Support Symposium to exchange information, identify issues, examine capability shortfalls, assess emerging technologies, and recommend areas for DoD action/resolution.</p> <p>8. Conduct accreditation assessments for 18 of 33 current signatory programs (11 Joint Terminal Attack Controller, 2 Forward Air Controller (Airborne), and 5 Joint Fires Observer).</p> <p>9. Lead development and refinement of four U.S. and NATO joint fires-related doctrine and tactics, techniques, and procedures publications.</p> <p>10. Plan and conduct quarterly Joint Fire Support and Combat ID-Friendly Force Tracking Executive Steering Committees and working group meetings to address identified shortfalls in those mission areas.</p>		

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Joint Fires C2 Interoperability</i>																												
Joint Fires C2 Interoperability																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Joint Fires C2 Interoperability</i>				
Joint Fires C2 Interoperability	1	2019	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605126J I <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	310.130	32.744	36.581	52.565	-	52.565	56.162	58.042	61.601	66.601	Continuing	Continuing
P001: <i>Core</i>	134.240	9.014	9.343	9.967	-	9.967	12.407	12.351	11.610	11.610	Continuing	Continuing
P003: <i>Black Dart</i>	25.483	3.000	3.000	3.000	-	3.000	3.500	3.466	3.366	3.366	Continuing	Continuing
P004: <i>Joint Distributed Engineering Plant</i>	17.248	2.500	2.738	1.000	-	1.000	1.800	1.700	1.500	1.500	Continuing	Continuing
P005: <i>Nimble Fire</i>	69.539	12.230	16.000	14.000	-	14.000	13.800	12.850	12.650	12.650	Continuing	Continuing
P006: <i>Cruise Missile Combat Identification (CID)</i>	63.620	6.000	5.500	4.998	-	4.998	4.655	4.675	4.475	4.475	Continuing	Continuing
P007: <i>Homeland Defense Capability</i>	-	0.000	0.000	15.000	-	15.000	20.000	23.000	28.000	33.000	Continuing	Continuing
P008: <i>Joint Regional Integrated Air and Missile Defense Capability</i>	0.000	0.000	0.000	4.600	-	4.600	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense chartered to plan, coordinate, and oversee Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for requirements and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads IAMD mission and utility analysis, integrates IAMD within the force protection joint capability area, conducts evaluations, demonstrations of joint IAMD architectures, and provides advocacy for innovative, technically mature, and affordable solutions.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the United States. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in the development of the IAMD prioritized capabilities list and the global integrated IAMD assessment and analysis of the Ballistic Missile Defense System. JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues and technical oversight of homeland capability solutions.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605126J <i>I Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	38.059	36.581	36.469	-	36.469
Current President's Budget	32.744	36.581	52.565	-	52.565
Total Adjustments	-5.315	0.000	16.096	-	16.096
• Congressional General Reductions	-0.015	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Decrease for Historical Underexecution	-	-	-3.603	-	-3.603
• FY 2017 Request for Additional Appropriations Not Addressed	-5.300	-	-	-	-
• Increase for Homeland	-	-	15.000	-	15.000
• Internal Realignment from Procurement to RDT&E	-	-	0.099	-	0.099
• Increase for JRICM	-	-	4.600	-	4.600

Change Summary Explanation

FY 2017 Request for Additional Appropriations Not Addressed (\$5.3M).

JIAMDO Core (P001): In FY 2019, \$.1M was realigned from Procurement to Core to support higher priority requirements.

The FY 2019 funding request was reduced by \$1.8 million to account for the availability of prior year execution balances and rephased into FY 2020 and FY 2021.

JIAMDO-Black Dart (P003): The FY 2019 funding request was reduced by \$0.3 million to account for the availability of prior year execution balances and rephased into FY 2020 and FY 2021.

JIAMDO-Joint Distributed Engineering Plant (P004): The FY 2019 funding request was reduced by \$0.5 million to account for the availability of prior year execution balances and rephased into FY 2020 and FY 2021.

JIAMDO-Nimble Fire (P005): Increased funding for FY 2018 will be used to hold two large Nimble Fire events in support of U.S. Fleet Forces Command, USPACOM, USSTRATCOM and USEUCOM. Additionally, funds will be used to improve electronic warfare, multi-spectral environment, advanced capability

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605126J <i>I Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	
<p>model, and space warfare. The FY 2019 funding request was reduced by \$0.5 million to account for the availability of prior year execution balances and rephased into FY 2020 and FY 2021.</p> <p>JIAMDO-Combat Identification (P006): The FY 2019 funding request was reduced by \$0.5 million to account for the availability of prior year execution balances and rephased into FY 2020 and FY 2021.</p> <p>JIAMDO-Homeland Defense Capability (P007): Further details are reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Annual Report to Congress</p> <p>JIAMDO-Joint Regional Integrated Air and Missile Defense Capability (P008): Was separated into a new project for transparency purposes. The program was increased by \$4.6 million in support of a critical follow-on Joint Regional IAMD Capability Mix (JRICM) II integrated and defense capability mix study.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)	Project (Number/Name) P001 / Core
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P001: Core	134.240	9.014	9.343	9.967	-	9.967	12.407	12.351	11.610	11.610	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads IAMD mission area and utility analyses, integrates IAMD within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with USSTRATCOM and USNORTHCOM in support of ballistic missile defense of the United States. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM, and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated IAMD Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Core	9.014	9.343	9.967
Description: Provides staff support for JIAMDO operations in the area of ballistic missile defense, air and cruise missile defense, homeland defense, requirements management, combat identification, modeling & simulation, all other JIAMDO analytical functions and products, senior level briefings, and all travel costs for government and contractor support personnel (including Combatant Commander liaison personnel). This includes performing analyses, demonstrations, and programmatic assessments of technology, operations, requirements, and weapons systems. In coordination with Services and CCMDs, JIAMDO Core also funds the definition, assessment, development, and approval of Joint IAMD operational concepts, operational architectures, and capability requirements to guide the Department's joint/interagency/combined fully integrated and net-centric capable IAMD (including defense against cruise missiles, unmanned aerial vehicles, and ballistic missiles). JIAMDO Core also provides funding to:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P001 / <i>Core</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
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<p>1. Develop and integrate joint studies, simulations, wargames, force resource allocation, and interoperability initiatives.</p> <p>2. Manage relevant Congressional interaction and CCMD interface through a cadre of liaisons collocated with major headquarters.</p> <p>3. Directly support and sponsor homeland air surveillance-related demonstration and analysis activities.</p> <p>4. Run the IAMD Working Group and co-chair the Protection Functional Capabilities Board focusing CCMD, Joint Staff, and Service collaboration efforts in generation of joint concepts and development of the IAMD architecture and roadmap.</p> <p>5. Develop U.S. positions for, and provide the U.S. head of delegation to, the NATO Air and Missile Defense Committee.</p> <p>JIAMDO Core enables strategic planning development, infrastructure, security, travel, and other support activities. Funding pays for: contracted Systems Engineering and Technical Assistance (SETA) support for Air & Cruise Missile Defense (ACMD), Ballistic Missile Defense (BMD), Homeland Air Security (HAS) strategic planning, studies & analysis, combat ID, modeling & simulation, all other JIAMDO analytical functions and products, senior level briefings, and all travel costs for government and contractor support personnel (including Combatant Commander liaison personnel). Additionally, the JIAMDO Core budget funds daily on-site security management personnel to meet DoD, National Industrial Security Program Operating Manual (NISPOM), and other security regulations, for all administrative and support functions related to higher security classifications, as well as basic office supplies and furniture, and classified/unclassified data connections.</p> <p>FY 2018 Plans: Continue performing Ballistic Missile Defense studies as directed by higher authority and provide contracted expertise in support of all JIAMDO analytical and requirements management activities. Continue DepSecDef high priority follow on assessment of non-kinetic and kinetic studies.</p> <p>FY 2019 Plans: Performing Ballistic Missile Defense studies as directed by higher authority and provide contracted expertise in support of all JIAMDO analytical and requirements management activities. Execute DepSecDef directed tasking for non-kinetic and kinetic layered defense modeling. Continue support to Chairman’s Net Assessment, Joint Military Net Assessment and OSD Policy using analysis and study findings.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>			
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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P001 / <i>Core</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Net increase between FY 2018 and FY 2019 due to a combination of internal realignment of funding to the Core for DepSecDef directed non-kinetic and kinetic studies, historical underexecution rephasing of funds into FY 2020 and FY 2021, and Major Headquarters Activities (MHA) reductions.			
Accomplishments/Planned Programs Subtotals	9.014	9.343	9.967

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

- (1) Support two major Nimble Fire exercises during FY 2019.
- (2) Conduct two IAMD Working Groups and at least one Functional Capabilities Board per month.
- (3) Conduct the annual Black Dart Counter-Unmanned Aerial System technology demonstration.
- (4) Support U.S. Representative to NATO Air Defense Council and Missile Defense Committee including two overseas meetings per year and numerous lower-level supporting functions.
- (5) Develop and maintain operational architecture compliance with DoD Architectural Framework (DODAF) standards.
- (6) Ensure 100% of all government employee travel is in accordance with the Joint Federal Travel Regulation/Joint Travel Regulation and all contractor travel is in accordance with applicable regulations.
- (7) Maintain all unclassified/classified LANs on a daily basis in accordance with the Joint Staff's Office of the Chief Information Officer guidance/policy.
- (8) Ensure all computers, NIPRNET/SIPRNET, are refreshed according to applicable policy/guidance.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)	Project (Number/Name) P003 / Black Dart
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P003: <i>Black Dart</i>	25.483	3.000	3.000	3.000	-	3.000	3.500	3.466	3.366	3.366	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads mission area and utility analyses for air and missile defense, integrates air and missile defense within the force protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Black Dart Counter Unmanned Aircraft Systems Technology Demonstration	3.000	3.000	3.000
<p>Description: Provides funding to support administration and execution of Black Dart demonstrations. Black Dart is a unique joint, interagency demonstration focusing on rapid development and implementation of Counter - Unmanned Aircraft Systems (C-UAS) technology from readily-available commercial and governmental products. Objectives include:</p> <ol style="list-style-type: none"> 1. Execute live-fly, live-fire C-UAS technology demonstration to assess and validate existing and emerging Integrated Air and Missile Defense (IAMD) capabilities. 2. Present emerging solutions to inform requirements decision-making. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018		
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P003 / <i>Black Dart</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
3. Identify and develop IAMD operational concepts, system interoperability, and operational architectures for the C-UAS mission set.				
4. Advocate for warfighters' desired C-UAS capabilities and affordable, integrated solutions.				
FY 2018 Plans: Expand coalition partner participation and develop scenarios integrating systems across land, littoral, and maritime domains.				
FY 2019 Plans: Continue stakeholder participation utilizing scenarios which are integrating systems across land, littoral, and maritime domains at venues to include Urban and sea-based scenarios. Analyze and present results of Black Dart 18 to Joint Staff, Joint Requirements Oversight Council and stakeholders.				
Accomplishments/Planned Programs Subtotals		3.000	3.000	3.000
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics				
1. Complete events within schedule and budget. Events provide useful data to improve C-UAS capability.				
2. Document gaps, develop and substantiate hardware, software, and employment concepts.				
3. Field C-UAS capability.				

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P004 / Joint Distributed Engineering Plant			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P004: Joint Distributed Engineering Plant	17.248	2.500	2.738	1.000	-	1.000	1.800	1.700	1.500	1.500	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense chartered to plan, coordinate, and oversee joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads mission area and utility analyses for air and missile defense, integrates air and missile defense within the force protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the United States. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Distributed Engineering Plant (JDEP)	2.500	2.738	1.000
Description: The JDEP is a tool for evaluating interoperability of developing or newly fielded systems; identifying interoperability deficiencies in existing systems; and verifying corrective actions in a controlled, repeatable environment through the use of hardware in the loop.			
FY 2018 Plans:			
Fund an appropriate joint distributed test event to assess the interoperability of joint IAMD weapons systems. Provide users the means to create family of systems environments by linking existing capabilities using hardware, software, and operator-in-			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P004 / <i>Joint Distributed Engineering Plant</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>the-loop. Link existing Service and Joint combat system engineering and test sites via distributed communications. Reduce developmental cycle times by leveraging existing facilities.</p> <p>FY 2019 Plans: Fund multiple, distributed test events to assess the interoperability of joint IAMD weapons systems with a focus on C-UAS capabilities to counter the emerging threat of Group 1 and 2 UAS. Continue to leverage live-fly data of the Black Dart technology demonstrations to develop scenarios that replicate the future operational environments. JDEP will continue to link existing Service and joint combat system engineering and test sites via distributed communications, as well as, reduce developmental cycle times by leveraging existing facilities and infrastructure.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: A majority of the functions executed in this program have been absorbed under the Nimble Fire and Black Dart programs. In addition, funding was reduced because of MHA reductions and transfer of funds to the Core program for higher priority requirements.</p>			
Accomplishments/Planned Programs Subtotals	2.500	2.738	1.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

1. Each JDEP event develops measures of effectiveness (MOE) & measures of performance (MOP) based on an eighteen month test planning and event process.
2. Complete events within schedule and budget.
3. Events provide useful data to improve air missile defense interoperability, with implemented and recommended corrective changes.
4. Events must be linked to the current approved IAMD architecture, provide joint benefit, contribute to joint interoperability, and address IAMD capability gaps.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)	Project (Number/Name) P005 / Nimble Fire
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P005: <i>Nimble Fire</i>	69.539	12.230	16.000	14.000	-	14.000	13.800	12.850	12.650	12.650	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads AMD mission area and utility analyses, integrates air and missile defense within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the United States. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: JIAMDO Nimble Fire	12.230	16.000	14.000
Description: Nimble Fire is the Department's only joint IAMD operator-in-the-loop modeling and simulation capability exploring the Chairman's top five critical joint IAMD capabilities: wide-area surveillance and engagement quality tracking, pre-launch interdiction, non-kinetic post-launch capabilities, ballistic missile discrimination, and increased weapons ranges and lethality. Nimble Fire events explore joint IAMD capabilities and concepts in the FYDP timeframe combining experienced operators from the tactical communities, virtual simulations accredited by the program offices, current and future advanced capabilities, an integrated air, ballistic and cruise missile threat, and informed scenarios from the Department's analytical agenda and CCMD operational plans. JIAMDO brings together stakeholders across the engineering, analytical, and tactical communities to conduct multiple events to assess Joint interoperability of Service and MDA programs of record, explore concepts of employment, inform tactics,			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P005 / <i>Nimble Fire</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>techniques and procedures and concepts of operation, provide insights that help shape CCMD integrated priorities and future operational plans, and inform senior leader acquisition and requirements decisions.</p> <p>FY 2018 Plans: Execute two large Nimble Fire events in support of U.S. Fleet Forces Command, USPACOM, USSTRATCOM and USEUCOM. Provide material support for two additional Service and/or program office events. Additionally, accomplish significant upgrades to the VWC environment and IAMD systems and capabilities:</p> <ol style="list-style-type: none"> 1. Electronic Warfare improvements in coordination with USSTRATCOM, Joint Electronic Preparedness for Advanced Combat (JEPAC), the Services and Missile Defense Agency (MDA) to better model "red" and "blue" electronic attack and electronic protection. Conduct analysis of electronic attack impact on: (1) F-15 Eagle Passive-Active Warning Survivability Systems (EPAWSS); (2) F/A-18E Integrated Defensive Electronic Countermeasures (IDECM), Surface Electronic Warfare Improvement Program (SEWIP) for Aegis, basic electromagnetic interference effects, and foundation for representing GPS modeling. 2. Multi-spectral environment improvements include upgrading the simulation backbone and service models to better handle capabilities such as Infrared Search and Track sensors, kill chains, environmental effects such as rain and clouds, and higher-fidelity threat signatures. 3. Advanced capability model improvements include expanded integrated fire control concepts involving capabilities such as Naval Integrated Fire Control – Counter Air (NIFC-CA) and fighter-centric kill chains, incorporation of advanced sensor capabilities such as the new IAMD radar for Aegis, Link-16 network enhancements, future threat kill chains and capabilities, and directed energy. Additionally, integrate an Advanced Gun Weapon System model into the environment to explore tactical command and control challenges and contributions to the overall defense of critical assets. 4. Space Warfare – integrate higher fidelity representations of Overhead Persistent Infrared (OPIR) assets and national to tactical contributions to the tactical fight. 5. Non-program of record experimentation of innovative uses of existing sensors and weapons across traditional IAMD assets. Examples include: ground-based sensors providing fire-control quality tracking to tactical air assets; contributions of unmanned assets to the air picture; and joint engagement sequences. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P005 / <i>Nimble Fire</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
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<p>6. Explore integration of offensive and defensive capabilities (kinetic and non-kinetic) in protection of select critical assets in USEUCOM.</p> <p>FY 2019 Plans: Execute two Nimble Fire events in support of PACOM, STRATCOM, EUCOM, and MDA. Provide material support for two additional Service and/or program office events including Joint Counter-Air Integration (JCI) Joint Test. Additionally, accomplish significant upgrades to the Virtual Warfare Center environment and IAMD systems and capabilities:</p> <ol style="list-style-type: none"> 1. Electronic Warfare improvements in coordination with USSTRATCOM, Joint Electronic Preparedness for Advanced Combat (JEPAC), the Services and Missile Defense Agency to better model "red" and "blue" electronic attack and electronic protection. Conduct analysis of electronic attack impact on: (1) F-15 Eagle Passive-Active Warning Survivability Systems (EPAWSS); (2) F/A-18E Integrated Defensive Electronic Countermeasures (IDECM), Surface Electronic Warfare Improvement Program (SEWIP) for Aegis, basic electromagnetic interference effects, and foundation for representing GPS modeling. 2. Multi-spectral environment improvements include upgrading the simulation backbone and service models to better handle capabilities such as Infrared Search and Track sensors, kill chains, environmental effects such as rain and clouds, and higher-fidelity threat signatures. 3. Advanced Capability Model improvements include expanded integrated fire control concepts involving capabilities such as Naval Integrated Fire Control – Counter Air (NIFC-CA) and fighter-centric kill chains, incorporation of advanced sensor capabilities such as the new Air and Missile Defense Radar (AMDR) for Aegis, Link-16 network enhancements, future threat kill chains and capabilities, and directed energy. 4. Space Warfare – integrate higher fidelity representations of Overhead Persistent Infrared (OPIR) assets and national to tactical (N2T) contributions to the tactical fight. 5. Non-program of record experimentation of innovative uses of existing sensors and weapons across traditional IAMD assets. Examples include: ground-based sensors providing fire-control quality tracking to tactical air assets; contributions of unmanned assets to the air picture; and joint engagement sequences. <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>			
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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P005 / <i>Nimble Fire</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
A funding increase for FY 2018 and FY 2019 was provided over baseline funding during FY 2018 to enhance electronic warfare modeling and simulation at the Virtual Warfare Center. The amount of the increase in FY 2019 (\$2M) was less than the increase in FY 2018 (\$4M), resulting in an apparent funding decrease from FY 2018 to FY 2019.			
Accomplishments/Planned Programs Subtotals	12.230	16.000	14.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

1. Complete events within schedule and budget.
2. Document gaps and shortfalls.
3. Inform the Joint Capabilities Board (JCB) on results and findings.
4. Specific details are classified.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P006 / Cruise Missile Combat Identification (CID)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P006: Cruise Missile Combat Identification (CID)	63.620	6.000	5.500	4.998	-	4.998	4.655	4.675	4.475	4.475	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads AMD mission area and utility analyses, integrates air and missile defense within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Cruise Missile Combat Identification (CID)	6.000	5.500	4.998
Description: Establishes joint requirements for emerging national and tactical combat identification technology and positions it for fielding to frontline weapon systems and the warfighter. Monitors, assesses, and enhances current joint air and cruise missile defense combat ID programs.			
FY 2018 Plans: Details of this program are classified and will be provided under a separate cover.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P006 / <i>Cruise Missile Combat Identification (CID)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Details of this program are classified and will be provided under a separate cover.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> No significant change in funding.			
Accomplishments/Planned Programs Subtotals	6.000	5.500	4.998

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Details of this program are classified.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P007 / <i>Homeland Defense Capability</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P007: <i>Homeland Defense Capability</i>	-	0.000	0.000	15.000	-	15.000	20.000	23.000	28.000	33.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

A. Mission Description and Budget Item Justification

This program is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Homeland Defense Capability	0.000	-	15.000
Description: Develop Homeland Defense Capability			
FY 2019 Plans: Perform technology development efforts. Further details are reported in accordance with with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.			
FY 2018 to FY 2019 Increase/Decrease Statement: JIAMDO tasked with management of project to develop additional homeland defense capabilities. Further details are reported in accordance with with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.			
Accomplishments/Planned Programs Subtotals	0.000	-	15.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

This program is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)			Project (Number/Name) P008 / Joint Regional Integrated Air and Missile Defense Capability				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P008: Joint Regional Integrated Air and Missile Defense Capability	0.000	0.000	0.000	4.600	-	4.600	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads mission area and utility analyses for air and missile defense, integrates air and missile defense within the force protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Regional Integrated Air and Defense Capability Mix (JRICM)	-	-	4.600
Description: Joint Regional Integrated Air and Defense Capability Mix (JRICM) will use analysis of adversary ballistic and cruise missile capabilities to determine if a layered missile defense can successfully degrade or defeat adversary missile attacks to extend base defense duration and maintain aircraft sortie generations rates. Funding will enable the study to proceed with support from the various government organizations and FFRDCs. Organizations will be funded to develop detailed analysis using modeling and simulation to study and evaluate attack operations, as well as defense capabilities in the 2023 timeframe.			
FY 2019 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018		
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P008 / <i>Joint Regional Integrated Air and Missile Defense Capability</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Conduct studies and analysis on air and missile defense capability mix. Deliveries will include briefings summarizing the impact that layered defense capabilities have on extending defense durations and aircraft sortie generation rate. Specific details are classified and can be provided upon request.				
FY 2018 to FY 2019 Increase/Decrease Statement: Study funding approved based on current threat environment.				
Accomplishments/Planned Programs Subtotals		-	-	4.600
C. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
D. Acquisition Strategy N/A				
E. Performance Metrics Specific details are classified and can be provided upon request.				

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0204571J I <i>Joint Staff Analytical Support</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	10.393	5.462	7.712	6.658	-	6.658	4.959	4.959	4.957	4.957	Continuing	Continuing
P001: <i>Future Joint Force Development</i>	10.393	3.562	5.712	5.301	-	5.301	4.959	4.959	4.957	4.957	Continuing	Continuing
P003: <i>GFM DI Enterprise Force Structure (EFS) Integration</i>	0.000	1.900	2.000	1.357	-	1.357	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for the Joint Staff and Combatant Commands (CCMDs). JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulate results to best assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include development and implementation of Joint Concepts, wide-ranging force structure assessments, course of action development for the joint force environment, analyses and studies to aid in decision-making, and other analysis efforts to implement timely, low-cost joint force development initiatives.

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	7.464	7.712	6.870	-	6.870
Current President's Budget	5.462	7.712	6.658	-	6.658
Total Adjustments	-2.002	0.000	-0.212	-	-0.212
• Congressional General Reductions	-2.002	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-
• Revised economic assumptions	-	-	-0.212	-	-0.212

Change Summary Explanation

FY 2017: Decrease in funding due to \$2,000K Congressional mark to Joint Staff Analytical Support and a \$2K undistributed Congressional mark to FFRDC. Total mark (\$2,002K)

FY 2018: Increase in funding to P003 GFM DI to complete development and fielding of Joint Planning Services pilot that is fully integrated with Joint Planning and Execution Services framework.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>
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FY 2019 thru FY 2022: Decrease in funding for FY 2019 thru FY 2022 is a result of (1) mandated 25% Major Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA and (2) changes in economic assumptions for non-fuel and non-pay inflation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>				Project (Number/Name) P001 / <i>Future Joint Force Development</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P001: <i>Future Joint Force Development</i>	10.393	3.562	5.712	5.301	-	5.301	4.959	4.959	4.957	4.957	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) program supports the Chairman of the Joint Chiefs of Staff Title 10, Section 153 statutory responsibilities for the analytical support, management, development, evaluation, and implementation of joint concepts in order to advance the operational effectiveness of the future Joint Force and enable the introduction of new capabilities. The Joint Concepts program supports the Chairman's statutory responsibility to provide "best military advice" to the SECDEF and POTUS by expressing his vision for the future joint force; addressing operational problems on a 20 year horizon; identifying joint force development implications; and identifying capabilities required to mitigate and solve future joint warfighting gaps. The overarching goal is to enable investment decisions between near and far term. Concepts drive horizontal integration for force development across the Services, Combatant Commands, Defense agencies, OSD and Joint Staff. An intent of the Joint Concepts program is to support senior leader decisions in balancing today's requirements and future force requirements. Key deliverables include:

Capstone Concept for Joint Operations (CCJO) that provides the Chairman's vision for the future joint operations and establishes aim points for the development of the future Joint Force. The key theme is globally integrated operations.

Family of Joint Concepts, based on National Military Strategy (NMS), provides operational approaches to future challenges or opportunities with respect to Russia, China, Iran, North Korea, and Countering Violent Extremist Organizations in order to guide current and future Joint Force development.

Joint Concept Transition Plans, developed for each joint concept, document approaches for Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF) changes in the future Joint Force and identifies conceptual ideas that may require further exploration.

Joint Operating Environment (JOE) describes the future security environment and projects the implications of change for the Joint Force so it can anticipate and prepare for potential conflicts. The JOE articulates the circumstances that are likely to alter the security environment and explores how the intersection and interaction of these changes might impact the character of war in the future. Finally, the JOE provides a framework to think about the full range of Joint Force missions and how they may evolve over time.

The International Force Development Division's (IFDD) mission is to ensure collaboration and integration throughout the spectrum of joint force development, so that both the Joint Staff and its Allies and partners invest in any required reforms to ensure continued, interoperable and seamless operations together to meet the objectives in the NMS. The Multinational Capability Development Campaign (MCDC) is an initiative led by the United States Joint Staff which partners with 22 countries and international organizations designed to develop and assess non-materiel force development solutions and close capability gaps in multinational operations. Funds are used solely for travel in support of U.S. led projects and events with multinational and coalition partners.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P001 / <i>Future Joint Force Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
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Title: Future Joint Force Development	3.562	5.712	5.301
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Description: Current efforts focus on updating the Capstone Concept for Joint Operations (CCJO) so it extends the strategic approach developed in the 2016 NMS out to 2035. The CCJO modification will provide a common view of the future operating environment and a vision for how the future joint force will conduct globally integrated operations. Also, the revised CCJO will identify force development implications and required capabilities to maintain U.S. competitive advantage against emerging threats out to 2035. In partnership with selected Combatant Commands and the Services, development of the Joint Operating Concepts to address strategic challenges has begun. The Joint Operating Concept (JOC) – China and JOC - Russia prospectuses have been approved. The Director Joint Staff has endorsed the framework and authorized the continued development of two JOCs. The initial research on JOC – North Korea has begun and the prospectus is expected to be approved in early FY 2018. The concept prospectus describes the compelling military challenge and how it will be addressed in the future. JOC – Iran is in the very early stages of prospectus development. Study of the 2035 operating environment continues and informs understanding of military challenges associated with the common view of the future operating environment. Work with Five Eyes (FVEY) countries is focused on developing a FVEY common view of the future operating environment. Development support was completed for the Joint Concept for Integrated Campaigning and the Joint Concept for Operating in the Information Environment. Concept implementation is underway for the Joint Concepts for rapid aggregation, robotic and autonomous systems, human aspects of military operations, access and maneuver in the global commons, preventing the transfer and use of weapons of mass Destruction, and operational contract support.

FY 2018 Plans:
Execute the Chairman's Joint Concept Program. Continue support for the NMS and execution of senior leader direction to develop a Capstone Concept for Joint Operations. In partnership with selected CCMDs, the Services and other Joint Staff directorates, obtain Vice CJCS approval of the JOC for China and Russia. Begin final official staffing of JOC – North Korea and complete the prospectus and initial draft of JOC – Iran. Support the development of JOC – Counter Violent Extremist Organizations. Continue futures study to inform our understanding of the challenges of the future operating environment. Continue implementing approved Joint Concepts in accordance with CJCS Instruction 3010. Continue multinational partnerships in futures and concept development. Continue integrating Joint Concepts across the Joint Staff to inform DOTMLPF capability development decisions.

FY 2019 Plans:
Execute the Chairman's Joint Concept program. In partnership with CCMDs, the Services and other Joint Staff directorates, obtain Vice CJCS approval of the Joint Operating Concepts for North Korea and Iran. Provide support to U.S. Special Operations Command to develop transition plan of JOC – Counter Violent Extremist Organizations. Continue futures study to inform our understanding of the challenges of the future operating environment. Continue implementing approved Joint Concepts as described in CJCS Instruction 3010. Maintain and enhance multinational partnerships in concept development. Integrate Joint Concepts across the Joint Staff to inform DOTMLPF capability development decisions.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P001 / <i>Future Joint Force Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Major events and projects in 2019 will include the International Concept Development and Experimentation Conference, a U.S. / NATO co-led event that is the annual forum of Supreme Allied Command Transformation and Joint Staff to provide a unique opportunity for the international concept development and experimentation community and stakeholders to discuss the most current issues of concept development and experimentation in the capability development process. Additional projects and events include travel to the MCDC Executive Steering Group (ESG) and National Directors' meetings to provide governance for the MCDC program as well as travel in support of U.S. led projects in the areas of logistics, personnel recovery, cyber, command and control and information sharing.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Decrease in funding for FY 2019 thru FY 2022 is a result of mandated 25% Major Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA.</p>			
Accomplishments/Planned Programs Subtotals	3.562	5.712	5.301

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Concept development performance metrics are derived from the Chairman's Title 10 responsibilities and guidance for developing and implementing Joint Concepts. These measures and metrics inform the Department's senior leadership by providing an azimuth for future joint force development.

Performance measure 1 – Joint Concepts were developed to examine military challenges and propose innovative joint solutions and associated capabilities in support of defense needs and priorities.
Metric: Joint Concepts align and inform the National Military Strategy, informed by rigorous futures analysis. The Joint Concepts Program resulted in relevant and timely advocacy among operations, plans, and force development communities.

Performance measure 2 – Joint Staff provided leadership for the development of Joint Concepts in collaboration with joint and multinational partners.
Metric: Joint Concepts governance system promote "best military advice" for the CJCS. Ideas and solutions are rigorously and objectively evaluated within a joint and multinational context. Joint concepts are continually monitored to ensure consistency, relevancy, and utility throughout their life cycle.

Performance measure 3 – Implement Joint Concepts.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 6	PE 0204571J / <i>Joint Staff Analytical Support</i>	P001 / <i>Future Joint Force Development</i>

Metric: Transition plans promote informed decisions for joint force development that leverage, integrate or inform related DOTMLPF capability development programs for maximum efficiency and effectiveness.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support				Project (Number/Name) P003 / GFM DI Enterprise Force Structure (EFS) Integration			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
P003: GFM DI Enterprise Force Structure (EFS) Integration	0.000	1.900	2.000	1.357	-	1.357	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Force Management Data Initiative (GFM DI) Enterprise Force Structure (EFS) integration effort provides the next steps for GFM mission application enhancements required to balance global force demand against available military force. This complex and multi-variant task requires modernized technologies that provide integrated information linking authoritative force structure data (derived from the GFM DI Organizational Servers) to C2 data (resident in GFM mission applications). The Joint Staff Operations Directorate is responsible for GFM allocation and is the functional manager of the GFM mission applications. Accordingly, the Joint Staff will employ a strategy for efficiently fulfilling Enterprise Force Structure (EFS) data utility.

The DoD must quickly transition from legacy force management systems that promulgate data disparity across the Defense enterprise in order to meet national military objectives that have evolved from large force scenarios to operations that include small-to-full scale activities. As stated in both the NSS and NMS, our adversaries demonstrate the ability to readily transition from non-kinetic to kinetic means. Consequently, Information Technology (IT) superiority, capabilities, and recognition of associated vulnerabilities are an operational imperative. Yet, warfighters, strategic planners and GFM decision makers are unable to exchange information in a manner that keeps pace with globally changing threats to rapidly and accurately accomplish force sourcing activities to support SecDef allocation decisions. The Joint Staff is mandated to utilize the Service's Organizational Server EFS data to enhance managing, assessing, and displaying the worldwide disposition of U.S. Forces. Key deliverables include incrementally developed, operationally realistic capability enhancements focused on resource-informed planning and GFM sourcing functionality required by JROCMs, the Capability Development Document (CDD) for GFM DI; Joint Command and Control (JC2) Capability Definition Package (CDP); Joint Operation Planning Process (JOPP) and Assessment CDP; and Force Planning & Deployment Planning/Execution CDP.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: GFM Data Initiative (GFM DI) Enterprise Force Structure Integration (EFS)	1.900	2.000	1.357
Description: The GFM DI EFS integration effort requires RDT&E funds to upgrade GFM mission applications in order to operationalize force structure data from the Service's Organizational Servers to actual forces for employment within the purview of allocation and Joint command and control. This GFM DI effort within the Joint Staff Analytical Support (JSAS) family of programs will immediately streamline the SECDEFs "Forces for Unified Commands" memorandum Assignment Tables. RDT&E efforts for assignment and apportionment functions ended in FY 2015 with the declaration of Full Operation Capability (FOC) for the Automated Global Force Management Tool. GFM DI planned milestones must be met to enable a global visibility capability. GFM applications managed by the Joint Staff are used by the JSAS family of programs. This effort to fund critical upgrades is a precondition to GFM DI EFS integration.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P003 / <i>GFM DI Enterprise Force Structure (EFS) Integration</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p><i>FY 2018 Plans:</i> RDT&E work will focus on the continued incremental development of the Joint Force Capabilities Catalog (JFCC) to operationalize the GFM DI by linking DoD Service force structure to dynamic GFM factors (capabilities, readiness, availability, employment and location) within the Global Laydown Server (GLS). This capability will provide a dynamic representation of military force disposition. GLS algorithms will enable the GFM mission applications to present meaningful information required for timely and accurate decision making to assist the Chairman in providing military advice. The JFCC will serve as a user interface that uses the GLS algorithms to streamline operations planning and GFM execution in support of Combatant Commander requirements.</p> <p>The FY 2018 strategy will focus on a unit type capabilities registration functionality within the JFCC that will unify the unit-based readiness and unit type reporting process by obtaining on-hand forces (personnel and equipment) via the EFS (GFM DI) standard format. The FY 2018 incremental development of the JFCC virtual application and associated dynamic force visibility will provide the true inventory of force availability based on Service employable entities (unit types) and sustainability factors, to enable the use of on-hand Service force capabilities identified down to the Service-defined lowest deployable entities for executive decision making and GFM mission execution.</p> <p><i>FY 2019 Plans:</i> FY 2019 work will focus on efforts to implement timely, low-cost initiatives and Global Force Management (GFM) focused tools delivering a global visibility of the disposition of DoD forces. This supports the preferred munitions and engineering and cross-servicing arrangements.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> This program recieved an increase of \$1.4M in both FY 2018 and FY 2019 to fund modification of GFM to interface with Joint Planning and Execution Services applications. Before the increase, the program was funded at \$0.6M in FY 2018 and \$0 in FY 2019. The resulting funding profile is \$2.0M in FY 2018 and \$1.4M in FY 2019. Also, this program received a \$.04M reduction due to changes in economic assumptions for non-fuel and non-pay inflation.</p>			
Accomplishments/Planned Programs Subtotals	1.900	2.000	1.357

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P003 / <i>GFM DI Enterprise Force Structure (EFS) Integration</i>

E. Performance Metrics

The JSAS efforts will result in a Global Laydown Server and Joint Force Capabilities Catalog that supports a global visibility capability allowing for joint future force integration with information requirements needed to support timely and dynamic response to Combatant Commanders' unforeseen contingency requirements. This is a cost-effective yet full spectrum approach to support and assist the Chairman in fulfilling his statutory responsibilities while improving current and future joint force management. Program measures include the following:

1. Meet IOC that enables rapid generation of Global Force Management (GFM) decision-making information for policy-makers and Combatant Commands based on authoritative Service force capability, readiness, availability and current employment data.
2. Reduce the manual process of assembling capability, readiness, availability, employment as the first step to providing enhanced force management decision-making. Mining this data is currently a labor-intensive, time-consuming process and significantly impedes rapid response capabilities.
3. Services, CCMDs, Joint Staff and OSD will be able to efficiently collect and analyze force generation data supporting GFM in far less time than the current process, and with an authoritative common view of the sourcing-to-employment tracking of forces.
4. The JFCC will enable the rapid generation of information when making time-sensitive decisions and allow a joint planner to use standard and consistent force structure data in the GFM sourcing solution generation and deployment planning, execution, and distribution processes.
5. Ability to meet the VCJCS guidance to meet the GFM DI Full Operating Capability (FOC) by FY 2020.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0303166J I <i>Support to Information Operations (IO) Capabilities</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	34.279	0.857	0.673	0.652	-	0.652	0.650	0.754	0.754	0.754	Continuing	Continuing
001: <i>Joint Information Operations Range</i>	34.279	0.857	0.673	0.652	-	0.652	0.650	0.754	0.754	0.754	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Information Operations Range (JIOR) provides DoD with a closed-loop, persistent, geographically distributed network to support Combatant Command (CCMD), Service, and other government agencies (C/S/A) training, testing, and experimentation within threat representative environments with realistic and relevant targets and command and control systems of interest. JIOR provides C/S/A's and key allied partners the ability to test deployment and collaboratively gain insights into advanced cyberspace and Electronic Warfare (EW) capabilities under current and future operational environments. JIOR integrates available cyberspace ranges with the training/test audience providing access to low density/high demand test and training resources including critical infrastructure, cyber targets, internet traffic, and opposing forces. JIOR supports Presidential policy and CJCS mandates for training, certification, and recertification of 6000+ cyber mission forces and DoD/Interagency cyber vulnerability assessments. The JIOR security construct allows users to develop, test, and secure their military capabilities and protect their identity and capabilities during range activities. C/S/A's conduct hundreds of mission rehearsal, training, testing, and experimentation events on the JIOR annually many of which take place simultaneously via secure virtual local area networks engineered and provided by JIOR.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.857	0.673	0.673	-	0.673
Current President's Budget	0.857	0.673	0.652	-	0.652
Total Adjustments	0.000	0.000	-0.021	-	-0.021
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Revised economic assumption	-	-	-0.021	-	-0.021

Change Summary Explanation

FY 2019 - 2023: Reflects changes in economic assumptions for non-fuel and non-pay inflation.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0303166J / Support to Information Operations (IO) Capabilities					Project (Number/Name) 001 / Joint Information Operations Range		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
001: Joint Information Operations Range	34.279	0.857	0.673	0.652	-	0.652	0.650	0.754	0.754	0.754	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Information Operations Range (JIOR) provides DoD with a closed-loop, persistent, geographically distributed network to support Combatant Command (CCMD), Service, and other government agencies (C/S/A) training, testing, and experimentation within threat representative environments with realistic and relevant targets and command and control systems of interest. JIOR provides C/S/A's and key allied partners the ability to test deployment and collaboratively gain insights into advanced cyberspace and Electronic Warfare (EW) capabilities under current and future operational environments. JIOR integrates available cyberspace ranges with the training/test audience providing access to low density/high demand test and training resources including critical infrastructure, cyber targets, internet traffic, and opposing forces. JIOR supports Presidential policy and CJCS mandates for training, certification, and recertification of 6000+ cyber mission forces and DoD/Interagency cyber vulnerability assessments. The JIOR security construct allows users to develop, test, and secure their military capabilities and protect their identity and capabilities during range activities. C/S/A's conduct hundreds of mission rehearsal, training, testing, and experimentation events on the JIOR annually many of which take place simultaneously via secure virtual local area networks engineered and provided by JIOR.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Information Operations Range	0.857	0.673	0.652
Description: The Joint Information Operations Range (JIOR) is a closed-loop network that forms a live-fire, distributed range utilizing encrypted tunneling to conduct training, testing, and experimentation in a threat representative environment to support Cyberspace and Electronic Warfare mission areas. This project is 100 percent cyber.			
FY 2018 Plans: Evaluate network automation tools (for potential deployment) to better manage the JIOR, increase JIOR cybersecurity, and reduce integration time prior to executing test and training periods.			
Evaluate four specific hardware/software courses of action, including multiprotocol label switching for potential future technology insertion on the JIOR network.			
FY 2019 Plans: Operationally test and evaluate selected JIOR network modernization courses of action.			
FY 2018 to FY 2019 Increase/Decrease Statement:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0303166J / <i>Support to Information Operations (IO) Capabilities</i>	Project (Number/Name) 001 / <i>Joint Information Operations Range</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Revised economic assumption for non-fuel and non-pay inflation.			
Accomplishments/Planned Programs Subtotals	0.857	0.673	0.652

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

The metrics below reflect JIOR research and revelopment goals to test newly available hardware and software (including automation software) that supports selection of a modernized network architecture for the future JIOR.

1. Reduction in network configuration/reconfiguration time for use/reuse of DoD designated cyber ranges and available capability providers due to JIOR modernization and technology insertion.
2. Estimated man-hours saved due to transforming manual integration of ranges, capability providers and users to automated integration.
3. Sufficient capacity & agility to support Cyber Mission Forces force development and systems cybersecurity assessments & testing (outcomes).
4. Improved rapid response for short-notice mission rehearsal requirements from days to on-demand (outcomes).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	44.500	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
758: Joint National Training Capability (JNTC)	0.000	0.000	32.550	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
761: Joint Simulations Systems (JSS)	0.000	0.000	1.103	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
769: Joint Knowledge Development & Distribution Capability (JKDDC)	0.000	0.000	4.168	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
701: Air Force Joint National Training Capability (JNTC)	0.000	0.000	2.964	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
772: Navy Joint National Training Capability (JNTC)	0.000	0.000	3.715	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note
 For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

These programs support readiness of the joint force by creating a joint training environment to replicate the complex and changing operational environment. These investments directly support defense strategic guidance and enhance joint warfighting readiness by building training capabilities that support the operational readiness of the force. The elements associated with this coordinated effort consist of:

- Joint National Training Capability (JNTC)
- Joint Simulation System (JSS)
- Joint Knowledge Development & Distribution Capability (JKDDC)
- Air Force JNTC
- Navy JNTC

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0804767J I <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	
<p>JNTC: The mission of the Joint National Training Capability program is to advance joint capabilities and interoperability by concentrating on emerging joint training requirements through training experiences using a managed set of globally distributed capabilities and activities. The program resources Service and Special Operations Forces joint training that improves interoperability and realism of tactical and operational joint training between the Services and USSOCOM. JNTC enables joint training for Combatant Commands and Services by developing relevant joint training content and ensuring global distributed access. JNTC enabling capabilities support the Services and USSOCOM in their requirement to provide trained and ready forces in support of Combatant Command operational requirements. This program focuses efforts on improving, rather than consuming readiness and creating a ready surge force consistent with Chairman’s guidance.</p> <p>JSS: The Joint Simulation System, consisting of the Joint Theater Level Simulation and the Joint Conflict and Tactical Simulation, provides a low cost, distributed or deployable, web-based joint training capability with a small technical and operator footprint. JSS funding provides warfighters with joint simulations and tools that enhance and enable joint training across Services, Combatant Commands, Combat Support Agencies, NATO, and multinational partners. The joint simulations and tools provided by JSS funding are critical enablers that support the delivery of trained, capable, and interoperable joint forces. JSS intent is to maintain a capability to share simulation environments with coalition partners by continuing limited investments ensuring Joint Theater Level Simulation and Joint Conflict and Tactical Simulation remain relevant providing reliable, low-cost, small footprint, distributed, and deployable joint training solutions.</p> <p>JKDDC: Joint Knowledge Development & Distribution Capability (JKDDC) Joint Knowledge Online (JKO) is the program of record for online joint training that implements and operationalizes the OSD training transformation JKDDC. JKO directly supports the CE2T2 program by developing, delivering, tracking, reporting, and supporting online training for Combatant Command exercises; Combatant Command required training; doctrinally based joint operations core curriculum; multinational, coalition, interagency training; OSD required training (externally funded); and administration of the Senior Enlisted Joint Professional Military Education program. JKO expends RDT&E funding for leading edge technology review, market research, and integration to directly enhance various aspects of the training capability required to support Combatant Commanders, CE2T2 program goals and objectives, and the Chairman's training guidance. JKO satisfies all requirements necessary to provide CE2T2 stakeholders with a distributed learning capability and access to web-based training content, learning resources, and distributed online training tools.</p> <p>Air Force JNTC: Air Force JNTC funding provides a focused upgrade to develop models for space-based and cyber capabilities for integration into the Joint Live, Virtual, and Constructive (JLVC) environment. Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements which significantly increases the training audience to additional joint and coalition participants. Additionally, the Air Force supports the integration of tactical models into the virtual environment.</p> <p>Navy JNTC: These funds enable Navy to develop unique maritime capabilities that integrate JLVC elements into a seamless joint training environment. Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and coalition forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	44.500	0.000	-	0.000
Current President's Budget	0.000	44.500	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to The Joint Staff in FY 2018 in PE 0804767J from 0804767D8Z. Prior year FY 2017 data will be reported by OSD P&R.

Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA					Project (Number/Name) 758 / Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
758: Joint National Training Capability (JNTC)	0.000	0.000	32.550	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to the Joint Staff in FY 2018 in PE 0804767J from 0804767D8Z.

For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

Investment in the Joint National Training Capability (JNTC) program enables Service and Combatant Commands to train as they operate. The funding requested continues to modernize joint training capabilities into a single integrating architecture aligned to DoD Chief Information Officer IT mandates. Funding supports the development of cloud-enabled modular training application services. Program intent is to reduce dependence on touch labor, and mitigate the impact of reductions in operation and sustainment funding. Momentum must be maintained to deliver operationally relevant training environments and respond to changes in global security landscape and the warfighters' operational environment. JNTC enables the Department of Defense to be responsive to the warfighters' changing operational concepts, threat environments, and best practices. In FY 2018, this investment continues expanding capabilities and access for Service and Combatant Command trainers to plan and execute joint training. Funds support improved relevance and realism of training by providing capabilities that replicate the contemporary and future operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint National Training Capability (JNTC)	-	32.550	-
<p>Description: JNTC provides the technical standards, architecture (blueprint), and development processes required to integrate joint training programs. The Joint Training Environment (JTE) is envisioned as an integrated network of training sites and nodes with accessible joint training and force development services. By leveraging existing training programs and initiating programmatic actions, JNTC develops credible opposing force capabilities and expanded access to assets typically unavailable to the training audience. These capabilities enhance the integration of joint training objectives into Service training events. RDT&E funding supports the technical integration of Joint and Service modeling and simulation training capabilities. The resulting capabilities enable selective aggregation of training audiences at the Combatant Command, Joint Task Force, and Component Command headquarter levels. The funding increases warfighter access to semi-automated training enablers within the Joint Training Synthetic Environment through web-based, modular cloud capabilities.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 758 / Joint National Training Capability (JNTC)
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>The Adaptive Training Capability Program (ATCP) is a subordinate component of JNTC that enables the joint force to be responsive to the warfighters' changing operational concepts, threat environments, and best practices. ATCP funding advances joint capabilities and interoperability by addressing emerging joint training requirements through a managed set of globally distributed joint live, virtual, and constructive enablers. ATCP funding promotes joint context to Service training programs and joint enablers supporting Combatant Command training requirements and high interest training issues identified in the Chairman's annual training guidance.</p> <p>FY 2018 Plans:</p> <ol style="list-style-type: none"> Integrate role player access capability into the Joint Training Tool environment. Continue to mature Joint Training Tool modular services to reach tier 1 and 2 joint training Initial Operating Capability (IOC) in FY 2019. This includes smart graphics that allow planners to describe an operation with graphics which auto-initiates the Joint Training Tool service modules to replicate the movement of forces, adjudicate interaction with opposing forces, and return results of the operation that can drive a training scenario and stimulate the appropriate decision points. Continue Joint Training Tool scenario development to support a broader range of joint training options. Continue to mature Joint Training Tool cloud capabilities and explore cloud hosting options for the long-term. <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.</p>			
Accomplishments/Planned Programs Subtotals	-	32.550	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 758 / <i>Joint National Training Capability (JNTC)</i>

E. Performance Metrics

RDT&E development efforts are evaluated based on the performance metrics. This ensures the joint force trainer capability development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to: access, cost, realism, relevance, and technology and are defined below.

Access – Develop design standards that enable participation across DoD and, as applicable, with coalition partners. Make the environment available to meet user demands.

Cost – Enable the Joint Force Trainer to prepare and execute training more efficiently than current capabilities allow.

Realism – Enable the Joint Force Trainer to create a training environment that is closer to the real world environment than current capabilities allow.

Relevance – Maintain operational relevance through adaptation to the changing operational environment.

Technology – Sustain the training environment network through developments for distributed home station training that include modular cloud-enabled training services.

Measures:

Cost - Vendors provide ordered hours and projected costs remain within 10 percent of government estimates.

Schedule - Task completions (software enhancements, bug fixes, and cyber security requirements) delivered within six months of government estimate.

Performance - Product results, outcomes or milestones meet specified requirements and successfully pass more than 80 percent of operational assessment test cases.

DoD Demand - Number of Commands, Services, and Agencies using Joint Staff developed training products.

Partner Nation Demand - Number of partner nations using Joint Staff developed training products.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA					Project (Number/Name) 761 / Joint Simulations Systems (JSS)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
761: Joint Simulations Systems (JSS)	0.000	0.000	1.103	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to the Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

In FY 2019, this project is merged with 758: Joint National Training Capability (JNTC)

For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

The Joint Simulation System (JSS) will decompose, harvest, and reuse DoD investment in joint simulations to develop cloud-enabled modular services (CEMS), reaching Initial Operating Capability in FY 2016. JSS will further develop the existing Joint Conflict and Tactical Simulation (JCATS) and Joint Theater Level Simulation (JTLS) to remain relevant and responsive to Combatant Command training requirements as the Joint Training Environment is implemented. JSS will provide design and development of web-based applications used as services in the cloud-enabled modular environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Simulation System (JSS)	-	1.103	-
Description: This effort provides warfighters with joint simulations and tools that enhance and enable joint training across Services, Combatant Commands, agencies and coalition partners. These joint simulations and tools are part of an overall joint live, virtual, and constructive baseline of training capabilities. They represent a set of training enablers, and “certified systems” that are interoperable and acceptable for use within the joint training environment. The joint simulations and tools provided by JSS are critical enablers that support the delivery of trained, capable, and interoperable Joint Forces.			
FY 2018 Plans:			
1. Modernize Joint Theater Level Simulation graphical user interface to take advantage of established open source and commercial enhancements.			
2. Modernize Joint Theater Level Simulation after action review capability for more efficient and faster queries and data retrieval.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 761 / Joint Simulations Systems (JSS)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
3. Develop the Joint Theater Level Simulation combat systems prototype into a web-based modular capability in support of the Joint Training Synthetic Environment.			
4. Virtualize and eliminate the Joint Theater Level Simulation and Joint Conflict and Tactical Simulation client server architecture in pursuit of a fully web-based service.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.			
Accomplishments/Planned Programs Subtotals	-	1.103	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
RDT&E development efforts are evaluated based on performance metrics. This ensures the development of joint force trainer capabilities synchronize with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more efficiently than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 761 / <i>Joint Simulations Systems (JSS)</i>

Measures:

Cost - Vendors provide ordered hours and projected costs remain within ten percent of government estimates.

Schedule - Task completions (software enhancements, bug fixes, and cyber security requirements) delivered within six months of government estimate.

Performance - Product results, outcomes or milestones meet specified requirements and successfully pass more than 80 percent of operational assessment test cases. Joint Theater Level Simulation (JTLS) and Joint Conflict and Tactical Simulation (JCATS) availability of use in support of all training activities remains above 95 percent.

DoD Demand - Number of exercises/events supported by JTLS and JCATS.

Partner Nation Demand - Number of partner nations using Joint Staff developed training products (active foreign military sales cases).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA					Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
769: Joint Knowledge Development & Distribution Capability (JKDDC)	0.000	0.000	4.168	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to the Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

Joint Knowledge Online (JKO) is DoD's authoritative source for online joint training. JKO is a DoD enterprise-wide, Joint individual training toolkit of web-enabled individual and small group training products, services, and enabling training technology. Products and services are developed in response to OSD program goals, CJCS high interest training issues, Joint Staff training priorities, and JKO stakeholders (Combatant Commands, Services, and Combat Support Agencies, interagency, and multinational) prioritized training requirements. JKO supports a career-long joint learning continuum, joint professional military education, and tailored common training standards to Service members for tasks that are jointly executed, resulting in trained, capable, and interoperable joint forces. JKO research and development will improve all components of the joint content management architecture including:

1. JKO Learning Content Management System (LCMS): Development and enhancement is required to integrate advanced individual and staff training technologies and methodologies with larger scale, collective training exercises, and modernize military training capability with a DoD enterprise-wide online training toolkit. JKO LCMS is necessary to develop, host and deliver JKO courses, track and report students' progress, completions and survey results more effectively and efficiently. JKO LCMS extends web-based, distributed access to mission-critical joint training requirements. There are currently over 2.7 million registered users of the JKO LCMS.
2. Small Group Scenario Trainer (SGST) desktop modeling and simulation based training: This JKO capability trains and prepares thousands of military and civilian personnel deploying to Combatant Command theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. Specifically, C/JTF "battle staffs" will be adequately trained, as individuals and as collective staffs, based on SGST development and implementation throughout the joint training enterprise. JKO integration of SGST simulation exercise scenarios and prerequisite JKO courses enable blended learning training support to large-scale, collective training exercises that augment the joint event learning cycle and support meeting Combatant Commander exercise objectives.
3. JKO mobile application training device development: Development and enhancements facilitate the global distribution of web-based joint training content on portable, hand-held platforms (cell phones and tablets). JKO mobile application extends access to training courses and learning resources to personal use of mobile phones and tablets.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 769 / <i>Joint Knowledge Development & Distribution Capability (JKDDC)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Title: Joint Knowledge Development & Distribution Capability (JKDDC)</p> <p>Description: Joint Knowledge Online (JKO) advance technology initiatives primarily include the JKO Learning Content Management System (LCMS) application, Small Group Scenario Trainer (SGST) desktop modeling, simulation-based training capability, and mobile courseware training applications. These capabilities increase access to, and facilitate the training and preparation of, hundreds of thousands of military and civilian personnel deploying to Combatant Command (CCMD) theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. JKO LCMS development and enhancements are required to develop, host, deliver, track, report and support students' completions, progress and survey results more effectively and efficiently. C/JTF "battle staffs" will be better trained, as individuals and as staffs, based on SGST development and implementation throughout the joint training enterprise. JKO mobile courseware training device development facilitates the global distribution of web-based joint training content on portable, hand-held platforms for DoD personnel.</p> <p>FY 2018 Plans:</p> <ol style="list-style-type: none"> 1. Develop, test and deliver two JKO Learning Content Management System (LCMS) releases resulting in improved cybersecurity, and a more effective and efficient online training management application that is interoperable with DoD personnel management systems. Requirements will be derived from CCMD user feedback and DoD training priorities directed by the Deputy Assistant Secretary of Defense for Readiness and the Chairman's training guidance. The objectives are to provide a DoD enterprise-wide online training toolkit, and develop content for pre-exercise training and support (as required by the Services) and support individual and unit training for Special Purpose - Marine Air Ground Task Force missions. JKO anticipates these enhancements will improve access and the ease of use for the projected ~50,000 daily log-ins and ~550,000 monthly course completions by DoD personnel. Improvements to the JKO LCMS will directly benefit thousands of individuals by providing them global 24/7 access to mandatory joint training as they prepare to participate in CCMD exercises and real world missions. JKO will also focus on enhancements to improve the management of individuals' training records and readiness reporting by extending information sharing and web services with DoD personnel management systems. 2. Develop, test, and deliver four JKO Small Group Scenario Trainer (SGST) desktop modeling and simulation application releases resulting in a more effective and efficient training capability integrated within the JKO Learning Content Management System (LCMS). JKO anticipates these enhancements will improve the quality of the training experience for CCMD exercise participants resulting in heightened preparedness for real world operations. The SGST will be used as part of the OSD-endorsed blended learning training component in approximately eight CCMD collective training exercises to prepare individuals serving on CCMD required small functional teams and C/JTF "battle staffs." 	-	4.168	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>3. JKO will assess, refine, and continue executing its comprehensive plan to enhance the JKO mobile application and mobile training products. JKO's planned components include courseware and video conversions to portable hand-held devices while leveraging other DoD agencies, interagency, and multinational training courseware ported to the JKO mobile application. JKO anticipates the development and conversion of ~200 training courses, eBooks, podcasts, job aids, and videos resulting in reduced cost for classroom training and thousands of hours delivered on demand to DoD personnel mobile platforms worldwide.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.</p>			
Accomplishments/Planned Programs Subtotals	-	4.168	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Joint Staff prescribed performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below:

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more efficiently than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 769 / <i>Joint Knowledge Development & Distribution Capability (JKDDC)</i>

Measures:

Identify, develop, test and implement 15 or more cyber-security, operational, and functional JKO LCMS requirements.

Identify, develop, test and implement 12 or more cyber-security, operational, and functional JKO SGST requirements.

Identify, develop, test and implement six or more cyber-security, operational, and functional JKO mobile App requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA					Project (Number/Name) 701 / Air Force Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
701: Air Force Joint National Training Capability (JNTC)	0.000	0.000	2.964	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to the Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

The Air Force JNTC funding provides a focused upgrade to develop models of space-based capabilities for integration into the joint live, virtual, and constructive environment. The Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements which significantly increases the training audience to joint and coalition participants.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Air Force Joint National Training Capability (JNTC)	-	2.964	-
<p>Description: Air Force continues to develop joint enablers that drive realistic/effective training by producing a deployable Electronic Warfare training capability for Europe which replicates highly advanced surface-to-air missiles and advanced anti-aircraft artillery threats for U.S. and coalition forces. Additionally, Air Force assists in the engineering, development, and deployment of joint cross-domain information sharing enterprise network architecture which enables joint and coalition participants to train while protecting classified information. Furthermore, the Air Force is creating cyber-contested environments in the distributed mission operations setting to challenge the joint exercise/training audience. Finally, comprehensive space effects are being integrated into the JLVC federation of models.</p> <p>FY 2018 Plans:</p> <ol style="list-style-type: none"> 1. Live, virtual, and constructive - operational training solution supporting collaborative planning, cost, after-action, and return on investment metrics. 2. Cyber simulator environment generator and "blue" cyber effects simulation. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 701 / Air Force Joint National Training Capability (JNTC)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
3. Space simulation improvements to model both space effects and opposition force capabilities affecting the space environment. FY 2018 to FY 2019 Increase/Decrease Statement: Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.			
Accomplishments/Planned Programs Subtotals	-	2.964	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures the development of Joint Force Trainer (subject matter expert) capabilities synchronized with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more efficiently than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?

Measures :

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 701 / <i>Air Force Joint National Training Capability (JNTC)</i>
<p>Cyber: Establish a persistent simulation environment that can be configured rapidly and accurately to reflect the desired operating environment of the training audience. Also, create an ability to reflect cyber activities against a live integrated air defense system.</p> <p>Space: A fully operational GPS environment which allows space operators to actively participate in distributed mission operations-Space, live, virtual and constructive missile warning, GPS disruption and infrared special events. Also develop models that model Space as a contested environment to accurately portray impacts of adversary actions in the Space domain.</p> <p>OPFOR: A prototype for a next generation tactical surface to air threat simulator emulating modern threats fielded with potential adversary maneuver elements. A plan for integrating Army ground instrumentation within the Air Force run Polygon Range complex.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA					Project (Number/Name) 772 / Navy Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
772: Navy Joint National Training Capability (JNTC)	0.000	0.000	3.715	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transferred to the Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

For FY 2019 and beyond data, please see PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.

A. Mission Description and Budget Item Justification

These funds enable the Navy to develop unique maritime capabilities that integrate joint live, virtual and constructive elements into a seamless joint training environment. The Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and coalition forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Navy Joint National Training Capability (JNTC)	-	3.715	-
<p>Description: Develops unique maritime capabilities that integrate joint live, virtual, and constructive (JLVC) elements into a seamless joint training environment. Using a scientific and phased approach that focuses on modeling ground, air, space, and maritime capabilities, this program researches new technologies and methods that provide a crucial technology-based foundation to all JNTC Training Transformation (T2), JLVC Federation, and Combatant Commanders exercise and engagement operations.</p> <p>FY 2018 Plans:</p> <ol style="list-style-type: none"> 1. Continue alignment of Navy LVC training standards with JLVC training standards to include integrated standards with USMC's aviation distributed virtual training environment. 2. Develop integrated capabilities between Navy tactical training ranges and synthetic training capabilities in support of Navy LVC efforts. 3. Accelerate research and development of combat identification training simulation as an enabler for spectrum operations in support of the information warfare commander. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 772 / Navy Joint National Training Capability (JNTC)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
4. Accelerate exploration of technologies to enable integrated air and missile defense and other combined warfare area and joint training with coalition partners in the Pacific Fleet area of responsibility including Japan, Korea, and Australia.			
5. Continue collaborative development with Service and agency partners to improve training realism and relevancy for tactical to operational levels of war.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2019 and beyond data, please see R-2 for PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) – Non MHA.			
Accomplishments/Planned Programs Subtotals	-	3.715	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures the Joint Force Trainer (subject matter expert) capabilities developed synchronizes with warfighter requirements. Performance metrics include, but are not limited to: time, money, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 772 / <i>Navy Joint National Training Capability (JNTC)</i>
<p>Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?</p> <p>Measures:</p> <p>Produce one Navy Training Baseline (NTB) software release to include documentation.</p> <p>Design and implement upgrades to Joint Semi-Automated Forces (JSAF) consistent with approved requirements and contractual requirements.</p> <p>Document the effects of JSAF capabilities (robustness) and stability.</p> <p>Design, implement, test, and integrate NTB enhancements in accordance with requirements.</p> <p>Continuously update the common operational picture during large scale JLVC exercises.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	42.940	-	42.940	40.071	39.209	41.044	41.044	Continuing	Continuing
758: Joint National Training Capability (JNTC)	-	0.000	0.000	29.871	-	29.871	27.198	27.775	30.705	30.705	Continuing	Continuing
769: Joint Knowledge Development & Distribution Capability (JKDDC)	-	0.000	0.000	1.126	-	1.126	1.108	1.108	1.108	1.108	Continuing	Continuing
701: Air Force Joint National Training Capability (JNTC)	-	0.000	0.000	2.917	-	2.917	2.869	2.869	2.869	2.869	Continuing	Continuing
772: Navy Joint National Training Capability (JNTC)	-	0.000	0.000	3.260	-	3.260	3.042	3.042	3.042	3.042	Continuing	Continuing
773: Joint Interoperability Division (JID)	-	0.000	0.000	1.845	-	1.845	1.919	1.095	0.000	0.000	Continuing	Continuing
774: USMC Joint National Training Capability (JNTC)	-	0.000	0.000	0.921	-	0.921	0.935	0.320	0.320	0.320	Continuing	Continuing
775: Advanced Distributed Learning (ADL)	-	0.000	0.000	3.000	-	3.000	3.000	3.000	3.000	3.000	Continuing	Continuing

Note
 For FY 2018 and prior year data, please see PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA.

A. Mission Description and Budget Item Justification
 These programs support readiness of the joint force by creating a joint training environment to replicate the complex and changing operational environment. These investments directly support defense strategic guidance and enhance joint warfighting readiness by building training capabilities that support the operational readiness of the force. The elements associated with this coordinated effort consist of:

- Joint National Training Capability (JNTC)
- Joint Knowledge Development & Distribution Capability (JKDDC)
- Air Force Joint National Training Capability (JNTC)

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0804768J I <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA</i>	
<ul style="list-style-type: none"> - Navy Joint National Training Capability (JNTC) - Joint Interoperability Division (JID) - Marine Corps Joint National Training Capability (JNTC) - Advanced Distributed Learning (ADL) <p>JNTC: The mission of the Joint National Training Capability (JNTC) program is to advance joint capabilities and interoperability by concentrating on emerging joint training requirements through collective training using a managed set of globally distributed capabilities and activities. The program resources Service and Special Operations Forces joint training that improve interoperability and realism of tactical and operational joint training between the Services and USSOCOM. JNTC enables joint training for Combatant Commands and Services by developing joint training content and ensuring global distributed access. JNTC enabling capabilities support Services and USSOCOM requirements to provide trained and ready forces in support Combatant Command operational requirements. This program focuses efforts on improving, rather than consuming readiness and create a ready surge force consistent with Chairman's guidance.</p> <p>JKDDC: Joint Knowledge Development & Distribution Capability (JKDDC) Joint Knowledge Online (JKO) is the program of record for online joint training that implements and operationalizes the OSD training transformation JKDDC. JKO directly supports the CE2T2 program by developing, delivering, tracking, reporting, and supporting online training for Combatant Command exercises; Combatant Command required training; doctrinally based Joint Operations Core Curriculum; multinational, coalition, interagency training; OSD required training; and administration of the Senior Enlisted Joint Professional Military Education program. JKO expends RDT&E funding for leading edge technology review, market research, and integration to directly enhance various aspects of the training capability required to support Combatant Commanders, CE2T2 Program Goals and Objectives, and the Chairman's training guidance. JKO satisfies all requirements necessary to provide CE2T2 stakeholders with a distributed learning capability and access to web-based training content, learning resources, and distributed online training tools.</p> <p>Air Force JNTC: The Air Force JNTC funding provides a focused upgrade to develop models for space-based and cyber capabilities for integration into the Joint Live, Virtual, and Constructive (JLVC) environment. Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements which significantly increases the training audience to additional joint and coalition participants. Additionally, the Air Force supports the integration of tactical models into the virtual environment.</p> <p>Navy JNTC: These funds enable Navy to develop unique maritime capabilities that integrate JLVC elements into a seamless joint training environment. The Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and coalition forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.</p> <p>JID: Joint Interoperability Division (JID) supports 35 annual schoolhouse interoperability courses and up to six CAPSTONE Joint Interface Control Officer (JICO) courses tied to various Combatant Command (CCMD) joint exercises. JID trains CCMD, Services and partner nations' operations center personnel on interoperability planning</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0804768J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA</i>
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tasks required during contingencies and exercises in emerging mission areas such as joint fires, net enabled weapons, remotely piloted aircraft, integrated air and missile defense, and contested operations including secure internet with Link-16/TDL equipped major weapon systems and smart bombs.

Marine Corps JNTC: These funds provide USMC stability and risk reduction to a variety of ongoing joint efforts focused on improving the fidelity and realism of training simulation systems that prepare Marine Air Ground Task Force (MAGTF) units for deployment in support of CCMD operations and is additionally available to other organizations via the JLVC federation of training tools. In support of the Commandant's planning guidance, the Marine Corps will continue to improve performance and support of the MAGTF Tactical Warfare Simulation in the areas of the JLVC-Multi-Resolution Federation (MRF) Bridge, common database terrain data ingestion, and JLVC interoperability. It also provides a single source training environment capability enabling users to select single or multiple play boxes (terrain data sets) for training simulation systems. In addition to developing an exercise planning, design, implementation, execution, and control tool, it also enhances pattern of life and indigenous population modular service enabling exercise designers' ability to rapidly build new scenarios and incorporate human geography elements into training scenarios.

ADL: The Advanced Distributed Learning (ADL) initiative supports innovation and provides policy oversight to help the Services, Joint Staff, and partner agencies deliver training and education more efficiently and cost effectively. ADL provides policy oversight and coordination across DoD, coalition partners, and other Federal agencies for distributed learning. This oversight supports interagency interoperability and promotes personnel readiness, ensuring the right people receive the right training at the right time.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	42.940	-	42.940
Current President's Budget	0.000	0.000	42.940	-	42.940
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and beyond to properly align CE2T2 RDT&E funding to a Non-MHA PE. For FY 2018 and prior year data, please see R-2 for PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA					Project (Number/Name) 758 / Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
758: Joint National Training Capability (JNTC)	-	0.000	0.000	29.871	-	29.871	27.198	27.775	30.705	30.705	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Investment in the Joint National Training Capability (JNTC) program enables Service and Combatant Commands to train as they operate. The requested funding continues to modernize joint training capabilities into a single integrating architecture for joint training aligned to DoD Chief Information Officer IT mandates. Funding supports development of cloud-enabled modular training application services. Program focus is to deliver operationally relevant training environments and respond to changes in the global security landscape and the warfighter's operational environment. JNTC enables the Department of Defense to be responsive to the warfighters' changing operational concepts, threat environments, and best practices. Funds support improved relevance and realism of training by providing capabilities that replicate the contemporary and future operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint National Training Capability (JNTC)	0.000	-	29.871
Description: JNTC provides the technical standards, architecture (blueprint), and development processes required to integrate/link joint training programs. The Joint Training Environment is envisioned as an integrated network of training sites and nodes with accessible joint training and force development services. By leveraging existing training programs and initiating programmatic actions, JNTC develops credible opposing force capabilities and expanded access to assets typically unavailable to the training audience. These capabilities enhance the integration of joint training objectives into Service training events. RDT&E funding supports the technical integration of Joint and Service modeling and simulation training capabilities. The resulting capabilities enable selective aggregation of training audiences at the Combatant Command, Joint Task Force, and Component Command headquarter level. The funding supports modernization of the joint training environment (JTE) to increase warfighter access to semi-automated training enablers within the joint training synthetic environment (JTSE) through web-based, modular cloud capabilities.			
FY 2019 Plans:			
1. Continue to modernize the information technology architecture supporting the delivery of joint training capabilities and services. Goal is to reduce development, integration, and information technology life-cycle costs.			
2. Design, develop, and integrate tailored architectures, adaptive technology, and plans for Joint Staff, Combatant Commander, and Service training events/exercises.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA	Project (Number/Name) 758 / Joint National Training Capability (JNTC)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
3. Add capability aligned to exercising operational plans that represents cross-theater challenges, smaller exercises and focus areas, and enabling innovative and low cost training approaches.			
4. Develop functional capabilities in accordance with the Joint Training Synthetic Environment (JTSE) modeling and simulation roadmap.			
5. Manage Joint Training Tool (JTT) development in accordance with the approved Joint Staff Modeling and Simulation Roadmap (May 2016), and guided by the Joint Training Interoperability Standards (June 2016). The first major milestone is Initial Operating Capability (IOC) in 2Q FY 2019. JTT Tier 1 and 2 Full Operational Capability (FOC) is targeted for 2Q FY 2021 and will provide refined Joint training capabilities to support Tier 1 and 2 exercises and further enable the Services to integrate and draw joint context to execute Tier 3 and 4 training and enhanced low overhead stimulation capabilities.			
6. Enhance current joint simulation (within JLVC) to keep pace with operational environment changes.			
7. Manage the enhancements to Service owned JLVC federates and technically integrate the broader JLVC federation following these enhancements.			
8. Promote operational relevance, technical relevance, and cybersecurity of Joint Theater Level Simulation (JTLS) and Joint Conflict and Tactical Simulation (JCATS).			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and out to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2018 and prior year data, please see R-2 for PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) – MHA.			
Accomplishments/Planned Programs Subtotals	0.000	-	29.871

C. Other Program Funding Summary (\$ in Millions) N/A
Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804768J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA</i>	Project (Number/Name) 758 / <i>Joint National Training Capability (JNTC)</i>

D. Acquisition Strategy
N/A

E. Performance Metrics
RDT&E development efforts are evaluated based on the performance metrics below. This ensures the Joint Force Trainer capabilities development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to: access, cost, realism, relevance, and technology and are defined below.

Access – Develop design standards that enable participation across DoD and, as applicable, with Coalition Partners. Make the environment available to meet user demands.

Cost – Enable the Joint Force Trainer to prepare and execute training more efficiently than current capabilities allow.

Realism – Enable the Joint Force Trainer to create a training environment that is closer to the real world environment than current capabilities allow.

Relevance – Maintain operational relevance through adaptation to the changing operational environment.

Technology – Sustain the training environment network through developments for distributed home station training that include modular cloud-enabled training services.

Measures:

Cost - Vendors provide ordered hours and projected costs remain within 10 percent of government estimates.

Schedule - Task completions (software enhancements, bug fixes, and cyber security requirements) delivered within six months of government estimate.

Performance - Product results, outcomes or milestones meet specified requirements and successfully pass more than 80 percent of operational assessment test cases.

DoD Demand - Number of Commands, Services, and Agencies using Joint Staff developed training products.

Partner Nation Demand - Number of partner nations using Joint Staff developed training products.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA					Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
769: Joint Knowledge Development & Distribution Capability (JKDDC)	-	0.000	0.000	1.126	-	1.126	1.108	1.108	1.108	1.108	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Knowledge Online (JKO) is the DoD unique and authoritative source for online joint training. JKO is tasked to develop a DoD enterprise-wide, joint individual training toolkit of web-enabled individual and small group training products, services, and enabling training technology. Products and services are developed in response to OSD program goals, CJCS high interest training issues, Joint Staff training priorities, and JKO stakeholders (Combatant Commands, Services, and Combat Support Agencies, interagency, and multinational) prioritized training requirements. JKO supports a career-long joint learning continuum, joint professional military education, and tailored common training standards to Service members for tasks that are jointly executed, resulting in trained, capable, and interoperable joint forces. JKO research and development will improve all components of the Joint Content Management Architecture including:

1. JKO Learning Content Management System (LCMS): Development and enhancement is required to integrate advanced individual and staff training technologies and methodologies with larger scale, collective training exercises, and modernize military training capability with a DoD enterprise-wide online training toolkit. JKO LCMS is necessary to develop, host and deliver JKO courses and track/report students' progress, completions and survey results more effectively and efficiently. JKO LCMS extends web-based, distributed access to mission-critical joint training requirements. There are currently over 2.7 million registered users of the JKO LCMS.
2. Small Group Scenario Trainer (SGST) desktop modeling and simulation based training: This JKO capability trains and prepares thousands of military and civilian personnel deploying to Combatant Command theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. Specifically, C/JTF 'battle staffs' will be adequately trained, as individuals and the staffs collectively, based on SGST development and implementation throughout the joint training enterprise. JKO integration of SGST simulation exercise scenarios and prerequisite JKO courses enable blended learning training support to large-scale, collective training exercises that augment the joint event learning cycle and support meeting Combatant Commander exercise objectives.
3. JKO mobile application training device development: Development and enhancements facilitate the global distribution of web-based joint training content on portable, hand-held platforms (cell phones and tablets). JKO Mobile App extends access to training courses and learning resources to personal use of mobile phones and tablets.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Knowledge Development & Distribution Capability (JKDDC)	0.000	-	1.126
Description: Joint Knowledge Online (JKO) advance technology initiatives primarily include the JKO Learning Content Management System (LCMS) application, Small Group Scenario Trainer (SGST) desktop modeling and simulation based			

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>training capability, and mobile courseware training applications. These capabilities increase access to, and facilitate the training and preparation of, hundreds of thousands of military and civilian personnel deploying to Combatant Command (CCMD) theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. JKO LCMS development and enhancements are required to develop, host, deliver, track, report and support students' completions, progress and survey results more effectively and efficiently. C/JTF "battle staffs" will be better trained, as individuals and as staffs, based on SGST development and implementation throughout the joint training enterprise. JKO mobile courseware training device development facilitates the global distribution of web-based joint training content on portable, hand-held platforms for DoD personnel.</p> <p>FY 2019 Plans:</p> <p>1. Develop, test, and deliver two JKO Learning Content Management System (LCMS) releases resulting in improved cybersecurity, and a more effective and efficient online training management application that is interoperable with DoD personnel management systems. Requirements will be derived from Combatant Command user feedback and DoD training priorities directed by Deputy Assistant Secretary of Defense for Readiness (DASD(R)) and the Chairman's training guidance to provide a DoD enterprise-wide online training toolkit, and perform technical updates of content from FLASH to HTML5 for pre-exercise training and support. JKO anticipates these enhancements will improve access and ease of use for the projected ~50,000 daily log-ins and ~550,000 monthly course completions by DoD personnel. Improvements to the JKO LCMS will directly benefit thousands of individuals by providing global 24/7 access to mandatory joint training as they prepare to participate in CCMD exercises and real world missions. JKO will also focus on enhancements to improve the management of individual training records and readiness reporting as the JKO LCMS extends information sharing and web services with DoD personnel management systems. JKO will continue to maintain compliance with current security directives and to enhance functionality based on user experience and feedback.</p> <p>2. Develop, test, and deliver four JKO Small Group Scenario Trainer (SGST) desktop modeling and simulation application releases resulting in a more effective and efficient training capability integrated within the JKO LCMS. JKO anticipates these enhancements will improve the quality of the training experience for Combatant Command exercise participants resulting in heightened preparedness for real world operations. The SGST will be used as part of the OSD-endorsed blended learning training packages in approximately eight Combatant Command training exercises and additional training events preparing individuals serving on Combatant Command boards, centers, cells and working groups supporting small functional teams and C/JTF "battle staffs." Individual training proficiency improvement will be measured and quantified as part of the exercise design. JKO will continue to maintain compliance with current security directives and to enhance SGST functionality based on user experience and feedback.</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>3. JKO will assess, refine, and continue executing a comprehensive plan to enhance the JKO mobile application and mobile training products. JKO's planned components include courseware and video conversions to portable hand-held devices while leveraging other DoD agencies, interagency, and multinational training courseware ported to the JKO mobile application. JKO anticipates the development and conversion of ~200 training courses, eBooks, Podcasts, job aids, and videos resulting in reduced cost for classroom training and thousands of hours delivered onsite and on demand to DoD personnel mobile platforms worldwide. JKO will continue to maintain compliance with dynamic cybersecurity requirements as well as staying current with dynamic industry standard operating systems to enhance its mobile capability based on user experience and feedback.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and beyond to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2018 and prior year data, please see R-2 for PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) – MHA</p>			
Accomplishments/Planned Programs Subtotals	0.000	-	1.126

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Joint Staff prescribed performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

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Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?		
Measures:		
Identify, develop, test and implement 15 or more cyber-security, operational, and functional JKO Learning Content Management System (LCMS) requirements.		
Identify, develop, test and implement 12 or more cyber-security, operational, and functional JKO Small Group Scenario Trainer (SGST) requirements.		
Identify, develop, test and implement 6 or more cyber-security, operational, and functional JKO mobile application requirements.		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA					Project (Number/Name) 701 / Air Force Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
701: Air Force Joint National Training Capability (JNTC)	-	0.000	0.000	2.917	-	2.917	2.869	2.869	2.869	2.869	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Air Force JNTC funding provides a focused upgrade to develop models for space-based capabilities for integration into the joint live, virtual, and constructive environment. The Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements which significantly increases the training audience to additional joint and coalition participants.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Air Force Joint National Training Capability (JNTC)	0.000	-	2.917
<p>Description: Air Force continues to develop joint enablers that drive realistic/effective training by producing a deployable electronic warfare training capability for Europe which replicates highly advanced surface-to-air missiles and advanced anti-aircraft artillery threats for U.S. and coalition forces. Additionally, Air Force assists in the engineering, development, and deployment of joint cross-domain information sharing enterprise network architecture which enables joint and coalition participants to train while protecting classified information. Furthermore, the Air Force is creating cyber-contested environments in the distributed mission operations setting to challenge the joint exercise/training audience. Finally, comprehensive space effects are being integrated into the JLVC federation of models.</p> <p>FY 2019 Plans:</p> <ol style="list-style-type: none"> 1. Live, virtual, constructive - operational training (LVC-OT) training solution supporting collaborative planning, cost, after-action, and return on investment metrics. 2. Cyber simulator environment generator and "blue" cyber effects simulation. 3. Space simulation improvements to model both space effects and operational forces capabilities affecting the space environment. <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and beyond</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2018 and prior year data, please see R-2 for PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) – MHA.</i>			
Accomplishments/Planned Programs Subtotals	0.000	-	2.917

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures the development of Joint Force Trainer (subject matter expert) capabilities synchronize with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?

Measures:

Cyber: Establish a persistent simulation environment that can be configured rapidly and accurately to reflect the desired operating environment of the training audience. Also, create an ability to reflect cyber activities against a live Integrated Air Defense system.

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Space: a fully operational GPS environment which allows space operators to actively participate in distributed mission operations space live, virtual, constructive missile warning, GPS disruption and Infrared special events. Also develop space models to model Space as a contested environment to accurately portray impacts of adversary actions in the space domain.

Operational Forces: a prototype for a next generation tactical surface to air threat simulator emulating modern threats fielded with potential adversary maneuver elements.

A plan for integrating Army ground instrumentation within the Air Force Polygon Range complex.

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Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA					Project (Number/Name) 772 / Navy Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
772: Navy Joint National Training Capability (JNTC)	-	0.000	0.000	3.260	-	3.260	3.042	3.042	3.042	3.042	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

These funds enable the Navy to develop unique maritime capabilities that integrate joint live, virtual, and constructive elements into a seamless joint training environment. The Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and Coalition Forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Navy Joint National Training Capability (JNTC)	0.000	-	3.260
<p>Description: Develops unique maritime capabilities that integrate joint live, virtual, and constructive (JLVC) elements into a seamless joint training environment. Using a scientific and phased approach that focuses on modeling ground, air, space, and maritime capabilities, this program researches new technologies and methods that provide a crucial technology-based foundation that supports all JNTC training transformation, JLVC federation, and Combatant Commanders exercise and engagement operations.</p> <p>FY 2019 Plans:</p> <ol style="list-style-type: none"> 1. Research and development for current and emerging Ballistic Missile Defense (BMD) threat representation. 2. Development of new capabilities for integration with the annual Navy training baseline software release enabling the development of tactics, techniques and procedures for contested battlespace environments and ballistic missile defense. 3. Integration of air and missile defense, electronic warfare, information operations, strike warfare, ballistic missile defense, "blue" force and opposition force capabilities. 4. Deliver Navy Continuous Training Environment (NCTE) simulation for combat system and C4I stimulation training. 5. Update emerging high-end threat capabilities into JSAF. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
6. Integrate virtual and blended reality into the JLVC environment.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and beyond to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2018 and prior year data, please see R-2 for PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) – MHA			
Accomplishments/Planned Programs Subtotals	0.000	-	3.260

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures the Joint Force Trainer (subject matter expert) capabilities development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to: time, money, realism, and fidelity and are defined below.

Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?

Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow?

Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?

Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?

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The Navy will produce one Navy training baseline software release to include documentation; will design and implement upgrades to Joint Semi-Automated Forces (JSAF) consistent with approved requirements and contractual requirements and document the effects of JSAF capabilities and stability. Will design, implement, test, and integrate enhancements in accordance with requirements.

For JSAF, Joint Simulation BUS (JBUS) reliability, scalability, and tactical control, the Navy will continuously update the common operational picture during large scale JLVC exercises.

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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA	Project (Number/Name) 773 / Joint Interoperability Division (JID)
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>773: Joint Interoperability Division (JID)</i>	-	0.000	0.000	1.845	-	1.845	1.919	1.095	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

JID supports 35 annual schoolhouse interoperability courses and up to six CAPSTONE Joint Interface Control Officer (JICO) courses tied to various Combatant Command (CCMD) joint exercises. JID trains CCMD, Services and partner nations operations center personnel on interoperability planning tasks required during exercises and contingencies in mission areas such as joint fires, net enabled weapons, remotely piloted aircraft, integrated air and missile defense, and contested operations including secure internet with Link-16/TDL equipped major weapon systems and smart bombs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Joint Interoperability Division (JID)	0.000	-	1.845
Description: JID requests FY 2019 funding to procure the phase II baseline of the Joint Interface Control Officer (JICO) simulator software and seven mobile training team (MTT) servers in order to emulate Link-16 terminals. The JICO Simulator will allow the JID to train students across the Services on the proper planning, management and execution of tactical data links (TDL). The simulator will allow the JID to build robust practice scenarios that students can execute fixing TDL architecture plans as necessary. This capability will not only create realistic training scenarios with the ability to inject multi-tactical data link network anomalies for training, but can also be used to support Combatant Command (CCMD) operations centers during planned exercises.			
FY 2019 Plans: Build robust practice scenarios for JICO/TDL students. Automate OPTASK LINK planning message construction. Emulate Joint Tactical Information Distribution System (JTIDS), Multifunctional Information Distribution System (MIDS), Satellite Transportable Terminal (STT) radio operations between weapon systems.			
FY 2018 to FY 2019 Increase/Decrease Statement: This is a new RDT&E effort starting in FY 2019 to procure Phase II baseline of the JICO simulator and seven MTT servers.			
Accomplishments/Planned Programs Subtotals	0.000	-	1.845

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C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Measures:
Cost - Vendor provides software enhancement costs within 10% of government estimate.

Schedule - Vendor provides software releases delivered within one month of government estimate.

Performance - Vendor provides software that passes 80% of the Operations Assessment Cases.

DoD Demand - Number of JICO courses, joint exercises, and JICO support team requests supported by the JICO simulator software.

Partner Nation - Number of Five Eyes partner nations using the JICO Simulator software (active foreign military sales cases).

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Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA					Project (Number/Name) 774 / USMC Joint National Training Capability (JNTC)		
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
774: USMC Joint National Training Capability (JNTC)	-	0.000	0.000	0.921	-	0.921	0.935	0.320	0.320	0.320	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

These funds advance USMC training capabilities by providing stability and risk reduction to a variety of efforts focused on improving the fidelity and realism of training simulation systems. These systems are tailored to prepare operational Marine Air Ground Task Force (MAGTF) units for worldwide deployment in support of CCMD operations and engagements and are available to any organization or entity training via the JLVC federation of training tools. Based on the Commandant's planning guidance, the Marine Corps will continue to improve performance of the MAGTF Tactical Warfare Simulation in the areas of the JLVC-multi-resolution federation bridge, common database terrain data ingestion, and JLVC interoperability. The MAGTF Tactical Warfare Simulation also provides a single source training environment capability that enables users to select single or multiple play boxes (terrain data sets) for training simulation systems easing the burden of requesting terrain, 3D models, and other geographic layers into a single source. In addition to developing an exercise planning, design, implementation, execution, and control tool, the MAGTF Tactical Warfare Simulation also enhances pattern of life (PoL) / indigenous population modular service enabling exercise designers the ability to rapidly build new scenarios and incorporate human geography elements into the training scenarios.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Marine Corps Joint National Training Capability (JNTC)	0.000	-	0.921
Description: Provides pattern of life (POL) / indigenous population (IP) concept development and integration, supporting both constructive and virtual training simulation systems by injecting "people packs" with realistic attributes and behaviors associated with specified regions. Full integration of terrain generation 3D models and objects into joint federation synthetic training environment eliminates the burden of requesting terrain data by the Services and CCMDs creates a single, shareable, repository across the federation. Addresses crucial integration of MTWS into the Korean side of multi-resolution federation bridge supporting Ulchi Focus Guardian covering training shortfalls in engineering obstacle simulations (minefields, chemical, anti-tank ditches, bridges, etc.). Initiates design and development of a joint exercise design and control tool enhancing connectivity across multiple platforms providing exercise planning, design and control within various joint simulation constructs.			
FY 2019 Plans: Continue development of pattern-of-life (POL) models that can insert synthetic opposing forces and civilian population into scenarios that will autonomously respond with native behaviors of that region providing synthetic adversaries that adapt to various training scenarios in multi-domain joint training.			

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Provide a capability for all simulation systems to use the same standardized terrain datasets across training domains. Sustain pre-deployment training for operations while supporting the readiness of deployed forces, particularly those primarily focused on global response force readiness.			
Address crucial integration of MTWS into Korean side of multi-resolution federation bridge supporting Ulchi Focus Guardian covering shortfalls identified in addressing engineering obstacle simulations (minefields, chemical, anti-tank ditches, bridges, etc.).			
Continue design and development of a joint exercise design and control tool enhancing interoperability and connectivity across multiple platforms. Deliver sharper training environment definitions, assist with defining friendly, enemy, neutrals (including joint multinational and synthetic forces), and support to concurrent planning tools.			
Explore innovative ways to train for operations in strategically challenging transregional, multi-domain and multi-functional (TMM) environments. Use web-based cloud technologies to accelerate exercise development and execution.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Funding transferred from PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA to PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA beginning FY 2019 and beyond to properly align CE2T2 RDT&E funding to a Non-MHA PE similar to the O&M appropriation. For FY 2018 and prior year data, please see R-2 for PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) – MHA			
Accomplishments/Planned Programs Subtotals	0.000	-	0.921

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures Marine Corps planners and the Joint Force Trainer (subject matter expert) capabilities involved in these development effort synchronize outcomes with warfighter requirements. Performance metrics include, but are not limited to: time, money, realism, and fidelity and are defined below.

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<p>Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow?</p> <p>Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow?</p> <p>Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow?</p> <p>Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow?</p> <p>The Marine Corps will provide key elements of the proposed change that will allow the USMC to structure a variety of LVC enhancements in a more cost-effective manner to support training efforts within the GRF, NATO, CCMDs, SP-MAGTF and other deploying forces. By expanding the capabilities of existing capabilities through partnerships and cost-sharing efforts that focus on emerging theater training requirements, the changes proposed herein leverage cloud and other technologies to provide the training necessary to address several DoD goals and objectives listed in Commandant's planning guidance and Chairman's joint training guidance.</p>		

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Appropriation/Budget Activity 0400 / 6				R-1 Program Element (Number/Name) PE 0804768J / COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA				Project (Number/Name) 775 / Advanced Distributed Learning (ADL)				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
775: Advanced Distributed Learning (ADL)	-	0.000	0.000	3.000	-	3.000	3.000	3.000	3.000	3.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The ADL Initiative supports innovation and provides policy oversight to help the Services, Joint Staff, and partner agencies deliver their training and education more efficiently and cost effectively—anytime, anywhere. ADL provides policy oversight and coordination across DoD, Coalition partners, and other Federal agencies for distributed learning. This work supports interoperability (i.e., ensuring interagency technical and organizational systems function together). Ultimately, this promotes personnel readiness, ensuring the right people receive the right training and education, at the right time, and at the right cost.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Advanced Distributed Learning (ADL)	0.000	-	3.000
Description: The ADL Initiative supports innovation and provides policy oversight to help the Services, Joint Staff, and partner agencies deliver their training and education more efficiently and cost effectively—anytime, anywhere. ADL provides policy oversight and coordination across DoD, Coalition partners, and other Federal agencies for distributed learning. This work supports interoperability (i.e., ensuring interagency technical and organizational systems function together). Ultimately, this promotes personnel readiness, ensuring the right people receive the right training and education, at the right time, and at the right cost.			
FY 2019 Plans:			
1. Continue implementation of revised DoDI 1322.26 requirements, while also providing coordination with Joint Services, and guidance on the incorporation of xAPI into distributed learning software systems.			
2. Provide support to joint services on transitioning emerging learning systems to include digital tutors, personal learning assistants, and the like which will further personalize training.			
3. Further develop research to provide learning science, specifications, guidance and best practices, and technology applications to the joint services in order to further enable their capabilities to deliver next generation learning across a distributed operations environment.			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 The Joint Staff		Date: February 2018
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804768J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - Non MHA</i>	Project (Number/Name) 775 / <i>Advanced Distributed Learning (ADL)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
4. Support enhancements to multinational training by continuing collaboration with coalition partners and gaining support to integrate e-learning.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> New RDT&E effort starting in FY2019			
Accomplishments/Planned Programs Subtotals	0.000	-	3.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

RDT&E development efforts are evaluated based on performance metrics. This ensures the development of Joint Force Trainer (subject matter expert) capabilities synchronize with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity.

Measures:

1. Number of collaborative advanced technology demonstrations (i.e., projects supporting transition of new technology into joint training).
2. Number of improvement plans defined (i.e., articulation of plans for future enhancements to joint training).
3. Influence on key Service and international ADL meetings and conferences that advance the discovery, sharing and delivery of interoperable training content.
4. Increase sharing of data among DoD, other federal agencies, and state and local education departments throughout the U.S. by making educational resources discoverable and retrievable.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0208043J I <i>Planning and Decision Aid System (PDAS)</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	14.761	3.036	3.037	3.037	-	3.037	3.037	3.097	3.097	3.097	Continuing	Continuing
P001: <i>Planning and Decision Aid System OPS</i>	14.761	3.036	3.037	3.037	-	3.037	3.037	3.097	3.097	3.097	Continuing	Continuing

A. Mission Description and Budget Item Justification

Provides engineering and testing support to the Planning and Decision Aid System, a classified Joint Staff automated information system supporting the Combatant Commanders, Services, and Department of Defense agencies.

Classified details provided in a separate budget exhibit submitted on SIPRNET.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	3.038	3.037	3.037	-	3.037
Current President's Budget	3.036	3.037	3.037	-	3.037
Total Adjustments	-0.002	0.000	0.000	-	0.000
• Congressional General Reductions	-0.002	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

FY 2017 decrease due to Congressional Mark to FFRDC.

Classified details provided in a separate budget exhibit submitted on SIPRNET.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 The Joint Staff **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0902298J I <i>Management HQ - OJCS</i>
---	---

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	18.675	0.826	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.501
P001: <i>Joint Staff Information Network (JSIN)</i>	18.675	0.826	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.501

Note

Deputy Secretary of Defense (DepSecDef) approved the alignment of Common IT services in the Pentagon and the National Capital Region (NCR) to the Joint Service Provider (JSP) operating as a field service activity in Defense Information Systems Agency (DISA). In FY 2018, JSIN resources will permanently transfer to JSP (DISA PE 0305830K).

A. Mission Description and Budget Item Justification

Provides funds for the Joint Staff Information Network (JSIN). JSIN is the network infrastructure (for both classified and unclassified information) enabling collaboration and information-sharing among the Joint Staff, Combatant Commands (CCMD) and the Services. The JSIN also provides crucial business-related, decision-making information, and workflow support affecting military operations in support of the JCS. JSIN improves actions processing for faster coordination of critical issues with Combatant Commands, Services, and agencies, as well as within the Joint Staff.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.826	0.000	0.000	-	0.000
Current President's Budget	0.826	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Deputy Secretary of Defense (DepSecDef) approved the alignment of Common IT services in the Pentagon and the National Capital Region (NCR) to the Joint Service Provider (JSP) operating as a field service activity in Defense Information Systems Agency (DISA). In FY 2018, JSIN resources will permanently transfer to JSP (DISA PE 0305830K).

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



United States Special Operations Command

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Research, Development, Test & Evaluation, Defense-Wide

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United States Special Operations Command • Budget Estimates FY 2019 • RDT&E Program

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	547,484	639,325	639,325	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation -----	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Research, Development, Test & Eval, DW				644,245	644,245
Total Research, Development, Test & Evaluation				644,245	644,245

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Research, Development, Test & Eval, DW	575,154	27,097	602,251
Total Research, Development, Test & Evaluation	575,154	27,097	602,251

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Applied Research	44,857	34,493	34,493		
Advanced Technology Development	88,324	72,605	72,605		
Operational System Development	414,303	532,227	532,227	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920
<u>Summary Recap of FYDP Programs</u>					
Intelligence and Communications	5,415	5,496	5,496		
Special Operations Forces	542,069	633,829	633,829	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----						
Applied Research				34,493		34,493
Advanced Technology Development				72,605		72,605
Operational System Development				537,147		537,147
Total Research, Development, Test & Evaluation				644,245		644,245
Summary Recap of FYDP Programs -----						
Intelligence and Communications				5,496		5,496
Special Operations Forces				638,749		638,749
Total Research, Development, Test & Evaluation				644,245		644,245

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Department of Defense
 FY 2019 President's Budget
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 (Dollars in Thousands)

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Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Applied Research	35,921		35,921
Advanced Technology Development	79,380		79,380
Operational System Development	459,853	27,097	486,950
Total Research, Development, Test & Evaluation	575,154	27,097	602,251
 Summary Recap of FYDP Programs -----			
Intelligence and Communications	6,286		6,286
Special Operations Forces	568,868	27,097	595,965
Total Research, Development, Test & Evaluation	575,154	27,097	602,251

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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Summary Recap of Budget Activities	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Applied Research	44,857	34,493	34,493		
Advanced Technology Development	88,324	72,605	72,605		
Operational System Development	414,303	532,227	532,227	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920
Summary Recap of FYDP Programs					
Intelligence and Communications	5,415	5,496	5,496		
Special Operations Forces	542,069	633,829	633,829	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
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 (Dollars in Thousands)

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	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
<u>Summary Recap of Budget Activities</u>						
Applied Research				34,493		34,493
Advanced Technology Development				72,605		72,605
Operational System Development				537,147		537,147
Total Research, Development, Test & Evaluation				644,245		644,245
<u>Summary Recap of FYDP Programs</u>						
Intelligence and Communications				5,496		5,496
Special Operations Forces				638,749		638,749
Total Research, Development, Test & Evaluation				644,245		644,245

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

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Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Applied Research	35,921		35,921
Advanced Technology Development	79,380		79,380
Operational System Development	459,853	27,097	486,950
Total Research, Development, Test & Evaluation	575,154	27,097	602,251
 Summary Recap of FYDP Programs -----			
Intelligence and Communications	6,286		6,286
Special Operations Forces	568,868	27,097	595,965
Total Research, Development, Test & Evaluation	575,154	27,097	602,251

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 FY 2019 President's Budget
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 (Dollars in Thousands)

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Appropriation -----	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
U.S., Special Operations Command	547,484	639,325	639,325	4,920	4,920
Total Research, Development, Test & Evaluation	547,484	639,325	639,325	4,920	4,920

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 (Dollars in Thousands)

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Appropriation -----	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
-----	-----	-----	-----	-----	-----
U.S., Special Operations Command				644,245	644,245
Total Research, Development, Test & Evaluation				644,245	644,245

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FY 2019 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

29 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
U.S., Special Operations Command	575,154	27,097	602,251
Total Research, Development, Test & Evaluation	575,154	27,097	602,251

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Defense-Wide
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
22	1160401BB	SOF Technology Development	02	44,857	34,493	34,493			U
		Applied Research		44,857	34,493	34,493			
67	1160402BB	SOF Advanced Technology Development	03	88,324	72,605	72,605			U
		Advanced Technology Development		88,324	72,605	72,605			
227	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,496	5,496			U
246	1105219BB	MQ-9 UAV	07	17,155	37,863	37,863			U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	17,633					U
248	1160403BB	Aviation Systems	07	156,054	259,886	259,886			U
249	1160405BB	Intelligence Systems Development	07	5,803	8,245	8,245			U
250	1160408BB	Operational Enhancements	07	52,495	79,455	79,455	1,920	1,920	U
251	1160431BB	Warrior Systems	07	67,086	45,935	45,935			U
252	1160432BB	Special Programs	07	2,267	1,978	1,978			U
253	1160434BB	Unmanned ISR	07	19,110	31,766	31,766	3,000	3,000	U
254	1160480BB	SOF Tactical Vehicles	07	3,211	2,578	2,578			U
255	1160483BB	Maritime Systems	07	52,199	42,315	42,315			U
256	1160489BB	Global Video Surveillance Activities	07	3,841	4,661	4,661			U

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29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
22	1160401BB	SOF Technology Development	02				34,493		34,493	U
		Applied Research					34,493		34,493	
67	1160402BB	SOF Advanced Technology Development	03				72,605		72,605	U
		Advanced Technology Development					72,605		72,605	
227	0305208BB	Distributed Common Ground/Surface Systems	07				5,496		5,496	U
246	1105219BB	MQ-9 UAV	07				37,863		37,863	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07							U
248	1160403BB	Aviation Systems	07				259,886		259,886	U
249	1160405BB	Intelligence Systems Development	07				8,245		8,245	U
250	1160408BB	Operational Enhancements	07				81,375		81,375	U
251	1160431BB	Warrior Systems	07				45,935		45,935	U
252	1160432BB	Special Programs	07				1,978		1,978	U
253	1160434BB	Unmanned ISR	07				34,766		34,766	U
254	1160480BB	SOF Tactical Vehicles	07				2,578		2,578	U
255	1160483BB	Maritime Systems	07				42,315		42,315	U
256	1160489BB	Global Video Surveillance Activities	07				4,661		4,661	U

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 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	S e c
22	1160401BB	SOF Technology Development	02	35,921		35,921	U
		Applied Research		35,921		35,921	
67	1160402BB	SOF Advanced Technology Development	03	79,380		79,380	U
		Advanced Technology Development		79,380		79,380	
227	0305208BB	Distributed Common Ground/Surface Systems	07	6,286		6,286	U
246	1105219BB	MQ-9 UAV	07	18,403		18,403	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07				U
248	1160403BB	Aviation Systems	07	184,993		184,993	U
249	1160405BB	Intelligence Systems Development	07	10,625		10,625	U
250	1160408BB	Operational Enhancements	07	102,307	3,632	105,939	U
251	1160431BB	Warrior Systems	07	46,942	11,040	57,982	U
252	1160432BB	Special Programs	07	2,479		2,479	U
253	1160434BB	Unmanned ISR	07	27,270	11,700	38,970	U
254	1160480BB	SOF Tactical Vehicles	07	1,121	725	1,846	U
255	1160483BB	Maritime Systems	07	42,471		42,471	U
256	1160489BB	Global Video Surveillance Activities	07	4,780		4,780	U

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Defense-Wide
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c e -
257	1160490BB	Operational Enhancements Intelligence	07	12,034	12,049	12,049			U
		Operational System Development		414,303	532,227	532,227	4,920	4,920	
Total Research, Development, Test & Eval, DW				547,484	639,325	639,325	4,920	4,920	

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Defense-Wide
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 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
257	1160490BB	Operational Enhancements Intelligence	07				12,049		12,049	U
		Operational System Development					537,147		537,147	
Total Research, Development, Test & Eval, DW							644,245		644,245	

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Defense-Wide
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 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Section
257	1160490BB	Operational Enhancements Intelligence	07	12,176		12,176	U
		Operational System Development		459,853	27,097	486,950	
Total Research, Development, Test & Eval, DW				575,154	27,097	602,251	

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U.S., Special Operations Command
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
22	1160401BB	SOF Technology Development	02	44,857	34,493	34,493			U
		Applied Research		44,857	34,493	34,493			
67	1160402BB	SOF Advanced Technology Development	03	88,324	72,605	72,605			U
		Advanced Technology Development		88,324	72,605	72,605			
227	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,496	5,496			U
246	1105219BB	MQ-9 UAV	07	17,155	37,863	37,863			U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	17,633					U
248	1160403BB	Aviation Systems	07	156,054	259,886	259,886			U
249	1160405BB	Intelligence Systems Development	07	5,803	8,245	8,245			U
250	1160408BB	Operational Enhancements	07	52,495	79,455	79,455	1,920	1,920	U
251	1160431BB	Warrior Systems	07	67,086	45,935	45,935			U
252	1160432BB	Special Programs	07	2,267	1,978	1,978			U
253	1160434BB	Unmanned ISR	07	19,110	31,766	31,766	3,000	3,000	U
254	1160480BB	SOF Tactical Vehicles	07	3,211	2,578	2,578			U
255	1160483BB	Maritime Systems	07	52,199	42,315	42,315			U
256	1160489BB	Global Video Surveillance Activities	07	3,841	4,661	4,661			U
257	1160490BB	Operational Enhancements Intelligence	07	12,034	12,049	12,049			U
		Operational System Development		414,303	532,227	532,227	4,920	4,920	

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U.S., Special Operations Command
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 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
22	1160401BB	SOF Technology Development	02				34,493		34,493	U
		Applied Research					34,493		34,493	
67	1160402BB	SOF Advanced Technology Development	03				72,605		72,605	U
		Advanced Technology Development					72,605		72,605	
227	0305208BB	Distributed Common Ground/Surface Systems	07				5,496		5,496	U
246	1105219BB	MQ-9 UAV	07				37,863		37,863	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07							U
248	1160403BB	Aviation Systems	07				259,886		259,886	U
249	1160405BB	Intelligence Systems Development	07				8,245		8,245	U
250	1160408BB	Operational Enhancements	07				81,375		81,375	U
251	1160431BB	Warrior Systems	07				45,935		45,935	U
252	1160432BB	Special Programs	07				1,978		1,978	U
253	1160434BB	Unmanned ISR	07				34,766		34,766	U
254	1160480BB	SOF Tactical Vehicles	07				2,578		2,578	U
255	1160483BB	Maritime Systems	07				42,315		42,315	U
256	1160489BB	Global Video Surveillance Activities	07				4,661		4,661	U
257	1160490BB	Operational Enhancements Intelligence	07				12,049		12,049	U
		Operational System Development					537,147		537,147	

R-119PB: FY 2019 President's Budget (Published Version), as of January 29, 2018 at 13:06:34

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U.S., Special Operations Command
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Sec
22	1160401BB	SOF Technology Development	02	35,921		35,921	U
		Applied Research		35,921		35,921	
67	1160402BB	SOF Advanced Technology Development	03	79,380		79,380	U
		Advanced Technology Development		79,380		79,380	
227	0305208BB	Distributed Common Ground/Surface Systems	07	6,286		6,286	U
246	1105219BB	MQ-9 UAV	07	18,403		18,403	U
247	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07				U
248	1160403BB	Aviation Systems	07	184,993		184,993	U
249	1160405BB	Intelligence Systems Development	07	10,625		10,625	U
250	1160408BB	Operational Enhancements	07	102,307	3,632	105,939	U
251	1160431BB	Warrior Systems	07	46,942	11,040	57,982	U
252	1160432BB	Special Programs	07	2,479		2,479	U
253	1160434BB	Unmanned ISR	07	27,270	11,700	38,970	U
254	1160480BB	SOF Tactical Vehicles	07	1,121	725	1,846	U
255	1160483BB	Maritime Systems	07	42,471		42,471	U
256	1160489BB	Global Video Surveillance Activities	07	4,780		4,780	U
257	1160490BB	Operational Enhancements Intelligence	07	12,176		12,176	U
		Operational System Development		459,853	27,097	486,950	

R-119PB: FY 2019 President's Budget (Published Version), as of January 29, 2018 at 13:06:34

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U.S., Special Operations Command
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
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Total U.S., Special Operations Command				547,484	639,325	639,325	4,920	4,920	

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U.S., Special Operations Command
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
				Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	Remaining Req with CR Adj Base + OCO + Emergency
Total U.S., Special Operations Command							644,245		644,245

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U.S., Special Operations Command
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

29 Jan 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Section
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Total U.S., Special Operations Command				575,154	27,097	602,251	

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United States Special Operations Command • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
22	02	1160401BB	SOF Technology Development.....	Volume 5 - 905

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
67	03	1160402BB	SOF Advanced Technology Development.....	Volume 5 - 911

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
227	07	0305208BB	Distributed Common Ground/Surface Systems.....	Volume 5 - 923
246	07	1105219BB	MQ-9 Unmanned Aerial Vehicle (UAV).....	Volume 5 - 933
247	07	1160279BB	Small Business Innovative Research/Small Bus Tech Transfer.....	Volume 5 - 941

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United States Special Operations Command • Budget Estimates FY 2019 • RDT&E Program

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
248	07	1160403BB	Aviation Systems.....	Volume 5 - 951
249	07	1160405BB	Intelligence Systems Development.....	Volume 5 - 1011
250	07	1160408BB	Operational Enhancements.....	Volume 5 - 1031
251	07	1160431BB	Warrior Systems.....	Volume 5 - 1033
252	07	1160432BB	Special Programs.....	Volume 5 - 1103
253	07	1160434BB	Unmanned ISR.....	Volume 5 - 1105
254	07	1160480BB	SOF Tactical Vehicles.....	Volume 5 - 1121
255	07	1160483BB	Maritime Systems.....	Volume 5 - 1129
256	07	1160489BB	Global Video Surveillance Activities.....	Volume 5 - 1157
257	07	1160490BB	Operational Enhancements Intelligence.....	Volume 5 - 1159

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United States Special Operations Command • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

Program Element Title	Program Element Number	Line #	BA	Page
Aviation Systems	1160403BB	248	07.....	Volume 5 - 951
Distributed Common Ground/Surface Systems	0305208BB	227	07.....	Volume 5 - 923
Global Video Surveillance Activities	1160489BB	256	07.....	Volume 5 - 1157
Intelligence Systems Development	1160405BB	249	07.....	Volume 5 - 1011
MQ-9 Unmanned Aerial Vehicle (UAV)	1105219BB	246	07.....	Volume 5 - 933
Maritime Systems	1160483BB	255	07.....	Volume 5 - 1129
Operational Enhancements	1160408BB	250	07.....	Volume 5 - 1031
Operational Enhancements Intelligence	1160490BB	257	07.....	Volume 5 - 1159
SOF Advanced Technology Development	1160402BB	67	03.....	Volume 5 - 911
SOF Tactical Vehicles	1160480BB	254	07.....	Volume 5 - 1121
SOF Technology Development	1160401BB	22	02.....	Volume 5 - 905
Small Business Innovative Research/Small Bus Tech Transfer	1160279BB	247	07.....	Volume 5 - 941
Special Programs	1160432BB	252	07.....	Volume 5 - 1103
Unmanned ISR	1160434BB	253	07.....	Volume 5 - 1105
Warrior Systems	1160431BB	251	07.....	Volume 5 - 1033

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	474.372	44.857	34.493	35.921	-	35.921	40.757	46.884	49.890	50.890	Continuing	Continuing
S100: <i>SOF Technology Development</i>	474.372	44.857	34.493	35.921	-	35.921	40.757	46.884	49.890	50.890	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element enables USSOCOM to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire emerging technologies for Special Operations Forces. This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	37.820	34.493	37.036	-	37.036
Current President's Budget	44.857	34.493	35.921	-	35.921
Total Adjustments	7.037	0.000	-1.115	-	-1.115
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	8.400	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.363	-			
• Other adjustments	-	-	-1.115	-	-1.115

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S100: *SOF Technology Development*

Congressional Add: *Program Increase*

Congressional Add: *Thermal Signature Management Technology Program*

Congressional Add Subtotals for Project: S100

Congressional Add Totals for all Projects

	FY 2017	FY 2018
	3.400	-
	5.000	-
Congressional Add Subtotals for Project: S100	8.400	-
Congressional Add Totals for all Projects	8.400	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>
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Change Summary Explanation

Funding:

FY 2017: Net increase of \$7.037 million is due to a transfer of -\$1.363 million for Small Business Innovative Research/Small Business Technology Transfer programs and congressional adjustments (\$3.400 million) for Program Increase and to fund the Thermal Signature Management Technology program (\$5.000 million).

FY 2018: None.

FY 2019: Decrease of -\$1.115 million is due to \$0.326 million for Department economic assumptions decrease and \$0.789 million due to realignment to higher command priorities.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>				Project (Number/Name) S100 / <i>SOF Technology Development</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S100: <i>SOF Technology Development</i>	474.372	44.857	34.493	35.921	-	35.921	40.757	46.884	49.890	50.890	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental co-investments with DOD, other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with USSOCOM capability deficiencies, capability objectives; technology thrust areas, and technology objectives. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: SOF Technology Development	18.141	15.157	16.421
Description: This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11.			
FY 2018 Plans: Continue ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduced signature technologies, high data-rate throughput, and advance lightweight armor and materials. Advance technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improve interfaces and displays, machine learning/artificial intelligence, and secure communications. Continue pursuit of methods to reduce operator load and provide advanced protection. Develop technologies for improved and widened window of target engagement (escalation of force), pursue enhancements to technologies that can aid in detection of enemy intentions and movement, and continued development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfer successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continued development of situational awareness and command/control systems.			
FY 2019 Plans: Continues ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduced signature technologies, high data-rate throughput, and advances lightweight armor and materials. Advances technologies for combat medical equipment, tactics, human performance, sensor and			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>	Project (Number/Name) S100 / <i>SOF Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>processing improvements, improves interfaces and displays, machine learning/artificial intelligence, and secure communications. Continues pursuit of methods to reduce operator load and provides advanced protection. Develops technologies for improved and widened window of target engagement (escalation of force), pursues enhancements to technologies that can aid in detection of enemy intentions and movement, and continues development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continued development of situational awareness and command/control systems.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.264 million due to increased number of technology readiness level technology development efforts to support SOF needs.</p>			
<p>Title: Tagging, Tracking, and Locating Technologies (TTL)</p> <p>Description: TTL funds Applied Research projects identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL applies leading edge nanotechnology, biometric and biotechnology, and chemistry which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.</p> <p>FY 2018 Plans: Continue projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiate projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.</p> <p>FY 2019 Plans: Continues projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiates projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.124 million supports minor adjustments.</p>	14.668	15.441	15.565
<p>Title: Classified Sub-Project</p> <p>Description: Classified Sub-Project (provided under separate cover).</p> <p>FY 2018 Plans: Details provided under separate cover.</p> <p>FY 2019 Plans:</p>	3.648	3.895	3.935

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>	Project (Number/Name) S100 / <i>SOF Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Details provided under separate cover.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Details provided under separate cover.			
Accomplishments/Planned Programs Subtotals	36.457	34.493	35.921

	FY 2017	FY 2018
<i>Congressional Add:</i> Program Increase	3.400	-
<i>FY 2017 Accomplishments:</i> BIO Medical Human Performance Small Molecule and C4 Immersive Training Technology.		
<i>Congressional Add:</i> Thermal Signature Management Technology Program	5.000	-
<i>FY 2017 Accomplishments:</i> Details provided under separate cover.		
Congressional Adds Subtotals	8.400	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	1,196.512	88.324	72.605	79.380	-	79.380	89.565	101.181	107.638	109.767	Continuing	Continuing
S200: <i>Advanced Technology Development</i>	1,167.777	74.202	53.362	57.648	-	57.648	67.702	79.031	85.042	86.744	Continuing	Continuing
SF101: <i>Engineering Analysis</i>	14.188	8.911	14.827	17.140	-	17.140	17.283	17.461	17.795	18.126	Continuing	Continuing
S225: <i>Information and Broadcast Systems Adv Tech</i>	14.547	5.211	4.416	4.592	-	4.592	4.580	4.689	4.801	4.897	Continuing	Continuing

A. Mission Description and Budget Item Justification

Advanced Technology Development (project S200) conducts rapid prototyping and Advanced Technology Demonstrations (ATDs). ATDs provide a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces (SOF) users. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. ATDs also address projects that are a result of unique joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

Engineering Analysis (project SF101) provides rapid response capability for the investigation, evaluation, and demonstration of technologies for SOF platform (ground, air, and maritime) and soldier system-unique requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: sensor integration; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation; target detection; weapon performance integration; and future SOF platform and soldier system requirements. Provides additional engineering analysis and testing required to transition items from national forces to theater forces.

Information and Broadcast Systems Advanced Technology (project S225) conducts rapid prototyping, advanced technology demonstrations, and advanced concept technology demonstrations of information and broadcast systems technology. Includes planning, analyzing, evaluating, and production information systems capabilities and distribution/dissemination broadcast systems capabilities. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project also integrates efforts with each other and conducts technology demonstrations in conjunction with joint experiments and other assessment events. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs for which prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	61.620	72.605	79.132	-	79.132
Current President's Budget	88.324	72.605	79.380	-	79.380
Total Adjustments	26.704	0.000	0.248	-	0.248
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	28.029	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.800	-			
• SBIR/STTR Transfer	-2.125	-			
• Other	-	-	0.248	-	0.248

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S200: *Advanced Technology Development*

Congressional Add: S200: *SOST Light Attack*

Congressional Add: S200: *Defense Technology Innovation*

Congressional Add Subtotals for Project: S200

Congressional Add Totals for all Projects

	FY 2017	FY 2018
	26.029	-
	2.000	-
	28.029	-
	28.029	-

Change Summary Explanation

Funding:

FY 2017: Net increase of \$26.704 million is due to a decrease for transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs (-\$2.125 million), an increase reprogramming action for Phase II Directed Energy Study (\$0.800 million), and Congressional adds of \$26.029 million for Light Attack and \$2.000 million for Defense Technology Innovation.

FY 2018: None.

FY 2019: Net increase of \$0.248 million due to increase of \$0.213 million for social media engagement incorporating Artificial Intelligence in the digital domain efforts, \$0.693 million increase across numerous project tasks and a decrease of \$0.658 million for Departmental economic assumption.

Schedule: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> / BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160402BB / <i>SOF Advanced Technology Development</i>

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S200 / Advanced Technology Development			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S200: <i>Advanced Technology Development</i>	1,167.777	74.202	53.362	57.648	-	57.648	67.702	79.031	85.042	86.744	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations. It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new programs and the insertion of appropriate technologies to acquisition programs. The element also addresses unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or are of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: SOF Special Technology Sub-Project	25.164	30.003	33.046
Description: This sub-project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. This project received two congressional adds in FY 2017.			
FY 2018 Plans: Continue the development and insertion of technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved weapons, communications, command, and control systems, machine learning/artificial intelligence, sensors, and situational awareness tools; lightweight armor and materials, alternative power systems, eco-friendly sustainable energy devices, long duration, reduced size, high output power supplies, and technologies that reduce the load of the operator. Continue development of technologies supporting undersea, air and ground mobility. Evaluate and develop sensors across the electromagnetic spectrum to meet operational requirements. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continue developing unique robotic systems to reduce the load of the operator and augment human performance. Continue to develop command, control, computer, and Intelligence Technology to implement a robust, ultra-wideband communication capability. Continue effort for field prototype system incorporating technologies likely to transition to fielded systems. Based upon agreed technology maturity metrics, transfer successful projects into programs of record, and conduct field experimentations at various venues to facilitate technology insertion.			
FY 2019 Plans: Continues the development and insertion of technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved weapons, communications, command, and control systems, machine learning/artificial			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S200 / <i>Advanced Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>intelligence, sensors, and situational awareness tools; lightweight armor and materials, alternative power systems, eco-friendly sustainable energy devices, long duration, reduced size, high output power supplies, and technologies that reduce the load of the operator. Continues development of technologies supporting undersea, air and ground mobility. Evaluates and develops sensors across the electromagnetic spectrum to meet operational requirements. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continues developing unique robotic systems to reduce the load of the operator and augment human performance. Continues to develop Command, Control, Computer, and Intelligence Technology to implement a robust, ultra-wideband communication capability. Continues effort for field prototype system incorporating technologies likely to transition to fielded systems. Based upon agreed technology maturity metrics, transfers successful projects into programs of record, and conducts field experimentations at various venues to facilitate technology insertion.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$2.730 million due to an increased number of higher technology readiness level technology development efforts to support SOF needs.</p>			
<p>Title: Tagging, Tracking, and Locating Technologies (TTL) Sub-Project</p> <p>Description: TTL funds SOF unique ATDs identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL rapidly prototypes and expeditiously transitions projects from laboratory to acquisition Programs of Record/operational use to address SOF capability deficiencies.</p> <p>FY 2018 Plans: Continue to exploit and integrate recently-proven and emerging technologies for TTL and TTL-enabling systems. Continue projects toward maturity that are linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA. Continue to increase focus on tactical sensors and enabling technologies in support of the special reconnaissance mission set.</p> <p>FY 2019 Plans: Continues to exploit and integrate recently-proven and emerging technologies for TTL and TTL-enabling systems. Continues projects toward maturity that are linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA. Continues to increase focus on tactical sensors and enabling technologies in support of the special reconnaissance mission set.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.178 million to address TTL shortfalls in the maritime and GPS denied environment.</p>	15.553	17.572	18.750
<p>Title: Classified Sub-Project</p>	5.456	5.787	5.852

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command	Date: February 2018
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Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S200 / <i>Advanced Technology Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Description: Classified Sub-Project (provided under separate cover).			
FY 2018 Plans: Details provided under separate cover.			
FY 2019 Plans: Details provided under separate cover.			
FY 2018 to FY 2019 Increase/Decrease Statement: Details provided under separate cover.			
Accomplishments/Planned Programs Subtotals	46.173	53.362	57.648

	FY 2017	FY 2018
Congressional Add: S200: SOST Light Attack	26.029	-
FY 2017 Accomplishments: Released Light Attack support for USSOCOM Broad Agency Announcement (BAA). Topics of the BAA include platform agnostic capabilities (i.e. munitions, sensors and mission systems) applicable to Light Attack aircraft.		
Congressional Add: S200: Defense Technology Innovation	2.000	-
FY 2017 Accomplishments: SOST Advanced Manufacturing.		
Congressional Adds Subtotals	28.029	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>				Project (Number/Name) SF101 / <i>Engineering Analysis</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
SF101: <i>Engineering Analysis</i>	14.188	8.911	14.827	17.140	-	17.140	17.283	17.461	17.795	18.126	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides a rapid response capability to support Special Operations Forces (SOF) platforms (ground, air and maritime), Unmanned Aerial Vehicle (UAV) payload sensors and soldier systems. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction studies, and engineering analyses. This project provides the engineering required to improve the design and performance integrity of the SOF platforms, UAV payload sensors and soldier support systems, sub-systems, equipment, and embedded computer software as they relate to the maintenance, overhaul, repair, quality assurance, modifications, materiel improvements, and service life extensions. This project also conducts risk reduction studies, analyses, and demonstrations to support emerging, time-critical weapons and sensor enhancements.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Platform Engineering Analysis	5.647	10.649	10.483
Description: Funding supports the development of rapid response capabilities to support SOF platform and soldier systems. Rapidly addresses technology needs for insertion into Programs of Record. Supports technology development to correct system deficiencies, improve platform asset life, and enhance mission capabilities.			
FY 2018 Plans: Continue to assess concepts and prototypes that provide increased ballistic protection of air, ground and undersea mobility platforms to include manned and unmanned UAVs, and mobility platform improvements to meet emerging threats. Assess and evaluate advanced precision guided munitions and scalable effects weapons. Identify, assess and evaluate improved C4 systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and next generation manned and unmanned Intelligence, Surveillance, and Reconnaissance (ISR) systems and common sensors and sensor suites.			
FY 2019 Plans: Continues to assess concepts and prototypes that provide increased ballistic protection of air, ground and undersea mobility platforms to include manned and unmanned UAVs, and mobility platform improvements to meet emerging threats. Assess and evaluate advanced precision guided munitions and scalable effects weapons. Identify, assess and evaluate improved C4 systems that incorporate significant improvements to operate in contested environments, systems that improve situational awareness on the battlefield, and next generation manned and unmanned ISR systems and common sensors and sensor suites.			
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.103 million due to minor adjustments in funding required for individual taskings.			
Title: Soldier System Engineering Analysis	0.477	0.496	0.489

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>Description: Funding supports engineering assessments and evaluation of technology feasibility, producibility, and integration readiness in the following areas: 1) next generation lightweight low-cost body armor and ballistic helmets 2) ballistic and laser variable light transmission protective eyewear 3) soldier worn sensors to assess ballistic and blast events as well as soldier health 4) next generation soldier worn load carriage systems 5) soldier worn head borne communications that provide greater situational awareness and hearing protection.</p> <p>FY 2018 Plans: Continue to assess advanced body armor and ballistic helmet materials, concepts and prototypes to reduce soldier load and provide increased ballistic protection against the latest emerging threats. Reduce the number of eyewear lenses needed and to have one lens that provides ballistic and laser protection as well as automatically darkens/lightens based on combat conditions. Evaluate soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assess technologies feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assess proof of concepts and technologies for next generation head borne communications systems that provide reliable and secure wireless transmission in all combat conditions, as well as provide 360 degree situational awareness and noise attenuation while increasing hearing protection.</p> <p>FY 2019 Plans: Continues to assess advanced body armor and ballistic helmet materials, concepts and prototypes to reduce soldier load and provide increased ballistic protection against the latest emerging threats. Reduces the number of eyewear lenses needed and to have one lens that provides ballistic and laser protection as well as automatically darkens/lightens based on combat conditions. Evaluates soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assesses technologies feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assesses proof of concepts and technologies for next generation head borne communications systems that provide reliable and secure wireless transmission in all combat conditions, as well as provide 360 degree situational awareness and noise attenuation while increasing hearing protection.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: None.</p>				
<p>Title: National to Theater Engineering Analysis</p> <p>Description: Provides additional engineering analysis and testing required to transition items from national forces to theater forces.</p> <p>FY 2018 Plans:</p>		2.077	2.182	2.202

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>Conduct additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.</p> <p>FY 2019 Plans: Conducts additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.020 million is due to minor adjustments required for testing.</p>				
<p>Title: Aviation Mission Improved Survivability</p> <p>Description: Funding supports engineering analysis activities to address aviation survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications and weapons) to achieve SOF mission objectives.</p> <p>FY 2018 Plans: Continue engineering analysis activities to improve SOF aviation mission survivability. Activities include, but are not limited to signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments. Proof of concepts will be developed and evaluated for purposes of Advanced Technology Development.</p> <p>FY 2019 Plans: Continues engineering analysis activities to improve SOF aviation mission survivability. Activities include, but are not limited to signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments. Proof of concepts with potential from prior year will be further matured.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$2.466 million is due to expected maturation of early alternative technologies into advanced prototypes capable of flight testing.</p>		0.710	1.500	3.966
Accomplishments/Planned Programs Subtotals		8.911	14.827	17.140
C. Other Program Funding Summary (\$ in Millions)				
N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>

C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S225 / Information and Broadcast Systems Adv Tech			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>S225: Information and Broadcast Systems Adv Tech</i>	14.547	5.211	4.416	4.592	-	4.592	4.580	4.689	4.801	4.897	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts rapid prototyping of information and broadcast system technology. Includes cyber capabilities that predict the best media channels to reach potential target audiences, data mining and information collections tools, propaganda and social behavior analytical tools, cultural analysis tool sets and emerging technologies that support the planning and analytical needs for the Military Information Support Operations (MISO) forces. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project integrates efforts and conducts technology demonstrations in conjunction with joint experiments and other assessment events and performs market research on emerging technologies that support all phases of MISO. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs. Seeks technologies that will transform current MISO capabilities through two major objectives: 1) Exploit technologies capable of disseminating products to reach target audiences across a variety of media to include audiences in denied areas. 2) Automate and improve MISO planning and analytical capability through technologies that are integrated into SOF planning systems (Cultural Analysis, Targeting, Theme Development, Media & Product Selection, Distribution & Dissemination, and Measures of Effectiveness). Develops software applications that increases the efficiency and shortens the timeline to get MISO dissemination packages approved. Develops hardware/software tools that facilitate the collaboration and sharing of information and other critical data.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Broadcast and Dissemination Modernization	5.211	4.416	4.592
Description: Develops emerging technologies available in the marketplace to transform and modernize planning, analysis, development, broadcast, distribution, dissemination, and feedback capabilities for MISO forces. This initiative will also continue development of appropriate emerging technologies initially identified by Advance Technology Demonstrations and Joint Capability Technology Demonstrations to transition to acquisition programs. Technologies include: multi-frequency broadcast systems; digital broadcast capabilities; remote controlled electronic paper; near-real-time command and control of unattended systems, especially in denied areas; focused/beam speaker sound technologies; visual projection technologies; advanced commercial broadcast technologies including amplitude modulation and frequency modulation radio transmitters and antenna; television transmitter and antenna systems; internet and telephony dissemination and broadcast systems; technologies capable of long-loiter broadcast and delivery in denied and permissive environment; and technologies that automate and improve planning and analytical capability through integrated capabilities.			
FY 2018 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S225 / <i>Information and Broadcast Systems Adv Tech</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
Continue performance of engineering studies, development, and demonstrations of planning, analysis, distribution, and broadcast capabilities.			
<i>FY 2019 Plans:</i> Continues performance of engineering studies, development, and demonstrations of planning, analysis, distribution, and broadcast capabilities. Incorporate social media engagement to include Artificial Intelligence in the digital domain.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Increase of \$0.213 million due to social media engagement incorporating Artificial Intelligence in the digital domain.			
Accomplishments/Planned Programs Subtotals	5.211	4.416	4.592

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	37.811	5.415	5.496	6.286	-	6.286	6.388	6.516	6.647	6.779	Continuing	Continuing
S400A: <i>Distributed Common Ground/Surface Systems</i>	37.811	5.415	5.496	6.286	-	6.286	6.388	6.516	6.647	6.779	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing Intelligence, Surveillance, and Reconnaissance Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Joint Task Force level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighter and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, other national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighter with the essential intelligence information and provides situation awareness information to the SOF leadership at all echelons. The four components of DCGS-SOF include the following: The Enterprise provides infrastructure and processing capability to allow for worldwide SOF intelligence information sharing. Full Motion Video PED provides (FMV) PED capabilities in garrison and deployed environments of manned and unmanned sensors. SILENT DAGGER provides Signals Intelligence exploitation capability in both garrison and deployed environments. The All Source Information Fusion (ASIF) will provide the intelligence analytical tools via a global and disconnected architecture.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	5.415	5.496	6.345	-	6.345
Current President's Budget	5.415	5.496	6.286	-	6.286
Total Adjustments	0.000	0.000	-0.059	-	-0.059
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.059	-	-0.059

Change Summary Explanation

Funding:

FY 2017: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>

FY 2018: None.

FY 2019: Decrease of \$0.059 million is due to Departmental economic assumption decrease.

Schedule: Schedule slip due to additional user requirement refinement and Market Research.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>			Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S400A: <i>Distributed Common Ground/Surface Systems</i>	37.811	5.415	5.496	6.286	-	6.286	6.388	6.516	6.647	6.779	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing Intelligence, Surveillance and Reconnaissance (ISR) Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Joint Task Force level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighter and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, other national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighter with the essential intelligence information and provides situation awareness information to the SOF leadership at all echelons. The four components of DCGS-SOF include the following: The Enterprise provides infrastructure and processing capability to allow for worldwide SOF intelligence information sharing. Full Motion Video (FMV) PED provides PED capabilities in garrison and deployed environments of manned and unmanned sensors. SILENT DAGGER provides Signals Intelligence exploitation capability in both garrison and deployed environments. The All Source Information Fusion (ASIF) will provide the intelligence analytical tools via a global and disconnected architecture.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: DCGS	5.415	5.496	6.286
FY 2018 Plans: Continue integration of emerging technologies and capability for Enterprise and ASIF such as: Advanced analytics, user interface, natural language processing (NLP), cloud, language translations, and disconnected operations into the DCGS-SOF baseline. Continue refining and integration of FMV PED emerging technologies and capabilities such as: over-watch/compound monitoring, develop analyst trip wire tools, next generation analytics processing, upgrading imaging and video exploitation tools, patterns of movement characterization and detection for single mission. Continue DCGS-SOF Limited Objective Events and exercise participation to test integration efforts. Continue development of the interoperability with Coalition partners, Defense Intelligence Information Environment (DI2E), and Joint Information Environment.			
FY 2019 Plans: Continues integration of emerging technologies and capability for Enterprise and ASIF such as: Advanced analytics, user interface, natural language processing (NLP), cloud, language translations and disconnected operations into the DCGS-SOF baseline. Continues refining and integration of FMV PED emerging technologies and capabilities such as: over-watch/compound monitoring, develop analyst trip wire tools, next generation analytics processing, upgrading imaging and video exploitation tools, patterns of movement characterization and detection for single mission. Continues DCGS-SOF Limited Objective Events and			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
exercise participation to test integration efforts. Continues development of the interoperability with Coalition partners, Defense Intelligence Information Environment (DI2E), and Joint Information Environment.			
FY 2018 to FY 2019 Increase/Decrease Statement: Net increase of \$0.790 million provides funding for technical expertise and technology proof of concepts associated with integrating emerging technology enhancements.			
Accomplishments/Planned Programs Subtotals	5.415	5.496	6.286

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/020401INTL: <i>Distributed Common Ground/Surface System</i>	18.146	11.042	17.863	-	17.863	16.436	13.918	15.683	17.781	Continuing	Continuing

Remarks

D. Acquisition Strategy
DCGS-SOF leverages SOF programs, DoD partners, National labs, and other Government Agencies to integrate commercial/government off-the-shelf systems, and other mature technologies into the Program of Record which resides within the SOF Information Enterprise and enables more agile access to (searchable, discoverable) and sharing of data and services to meet SOF-peculiar documented requirements. The technology allows for seamless integration and federation with DoD, interagency, and Coalition tactical ISR PED systems. The DCGS-SOF program office employs an agile development process with capability insertions into the development baseline for assessment and future deployment into the operational baseline. All development requirements are prioritized through the DCGS Requirements Working Group (DRWG) chaired by J2. Once approved, the requirements are evaluated and scheduled by an engineering development team. Using this methodology allows capabilities to be inserted in a fast and agile manner based on user requirements and priorities. All evolutionary technology insertions (ETIs) in the R-4 schedule are based on current program office projections. If requirements change based on the DRWG, the ETI and version capabilities identified may change.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Distributed Common Ground System (DCGS) Capabilities Modernization	Various	Various : Various	15.100	0.747	Jan 2017	0.734	Jan 2018	0.749	Jan 2019	-		0.749	Continuing	Continuing	-
Development and Integration - All Source Information Fusion	C/FFP	SITEC : Various	6.091	2.256	Jan 2017	2.301	Jan 2018	2.347	Jan 2019	-		2.347	Continuing	Continuing	-
Independent Verification and Validation	MIPR	MITRE : Bedford, MA	1.436	0.289	Mar 2017	0.295	Mar 2018	0.301	Mar 2019	-		0.301	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	1.788	-		-		-		-		-	Continuing	Continuing	-
Subtotal			24.415	3.292		3.330		3.397		-		3.397	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Support	C/FFP	SITEC : Various	3.210	0.928	Jun 2017	0.947	Mar 2018	1.646	Mar 2019	-		1.646	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	0.576	-		-		-		-		-	Continuing	Continuing	-
Subtotal			3.786	0.928		0.947		1.646		-		1.646	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	MIPR	SPAWAR : Charleston, SC	1.956	-		-		-		-		-	Continuing	Continuing	-
Independent Verification and Validation	MIPR	MITRE : Bedford, MA	2.591	0.289	Oct 2016	0.295	Oct 2017	0.295	Oct 2018	-		0.295	Continuing	Continuing	-
Interoperability Support	MIPR	JITC : Ft Huachuca, AZ	1.422	0.217	Feb 2017	0.221	Feb 2018	0.225	Feb 2019	-		0.225	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>
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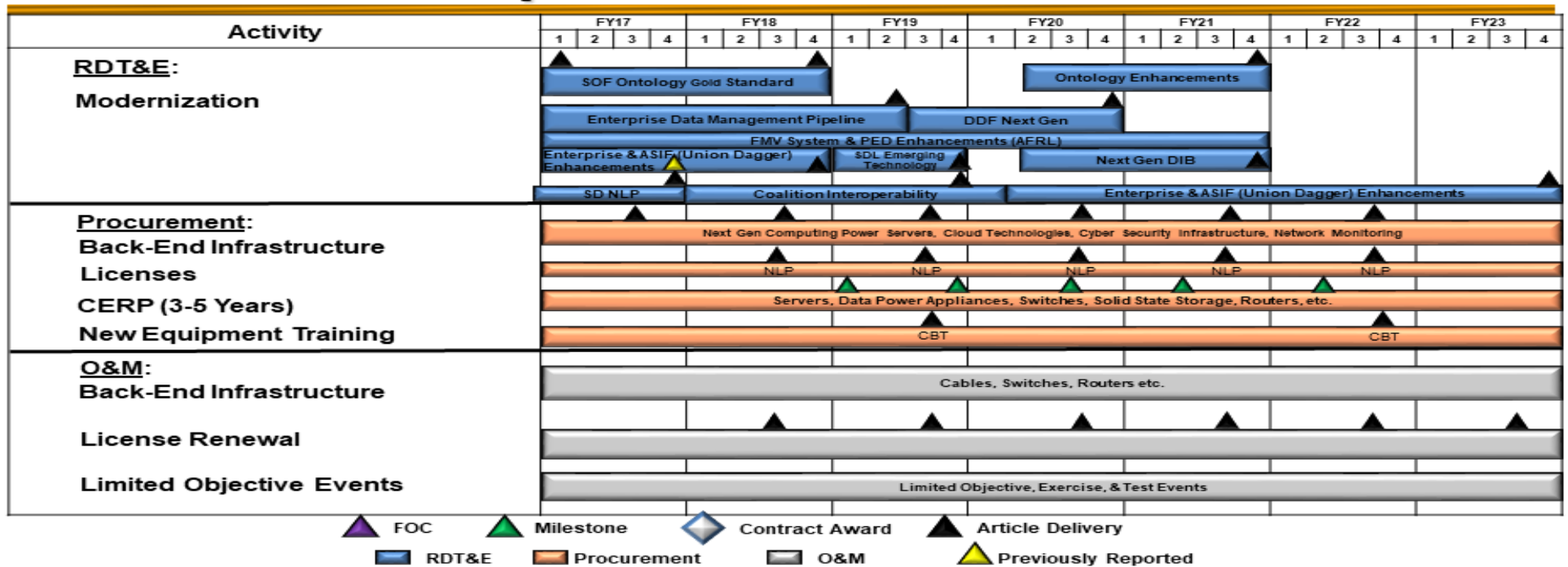
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Interoperability Testing	C/FFP	SITEC : Various	3.641	0.689	Mar 2017	0.703	Mar 2018	0.723	Mar 2019	-		0.723	Continuing	Continuing	-
Subtotal			9.610	1.195		1.219		1.243		-		1.243	Continuing	Continuing	N/A
Project Cost Totals			37.811	5.415		5.496		6.286		-		6.286	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>

DCGS-SOF Enterprise & ASIF Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

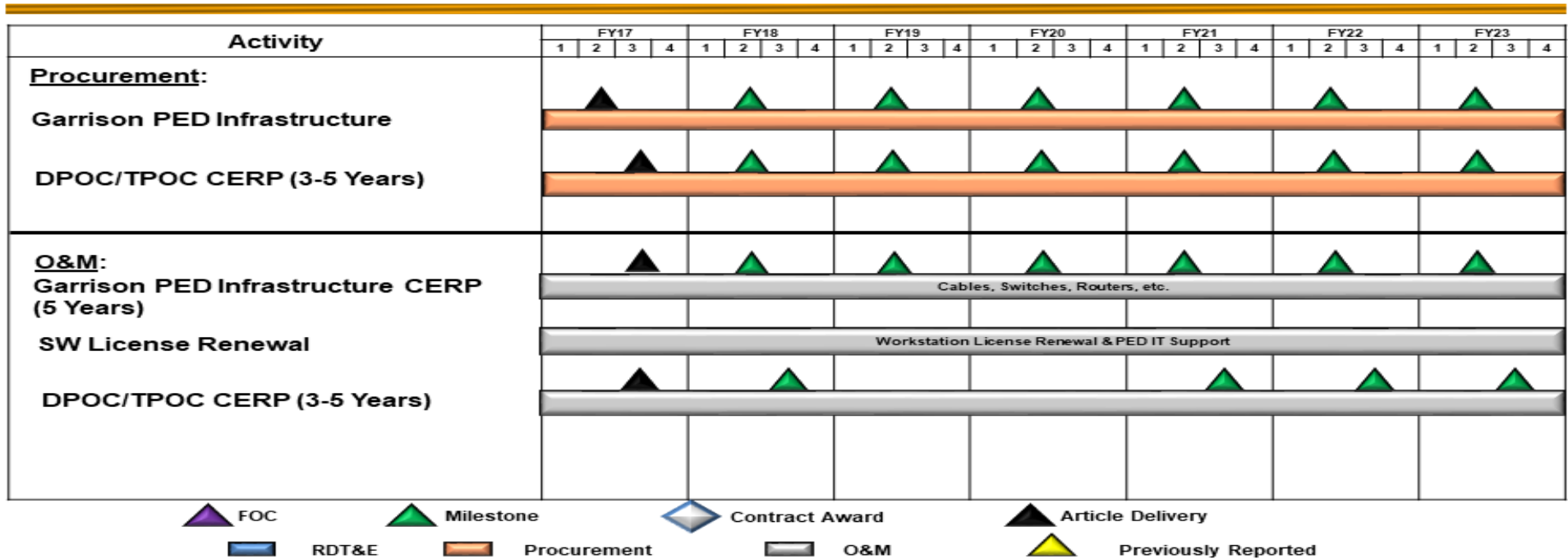
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 0305208BB / *Distributed Common Ground/Surface Systems*

Project (Number/Name)
S400A / *Distributed Common Ground/Surface Systems*

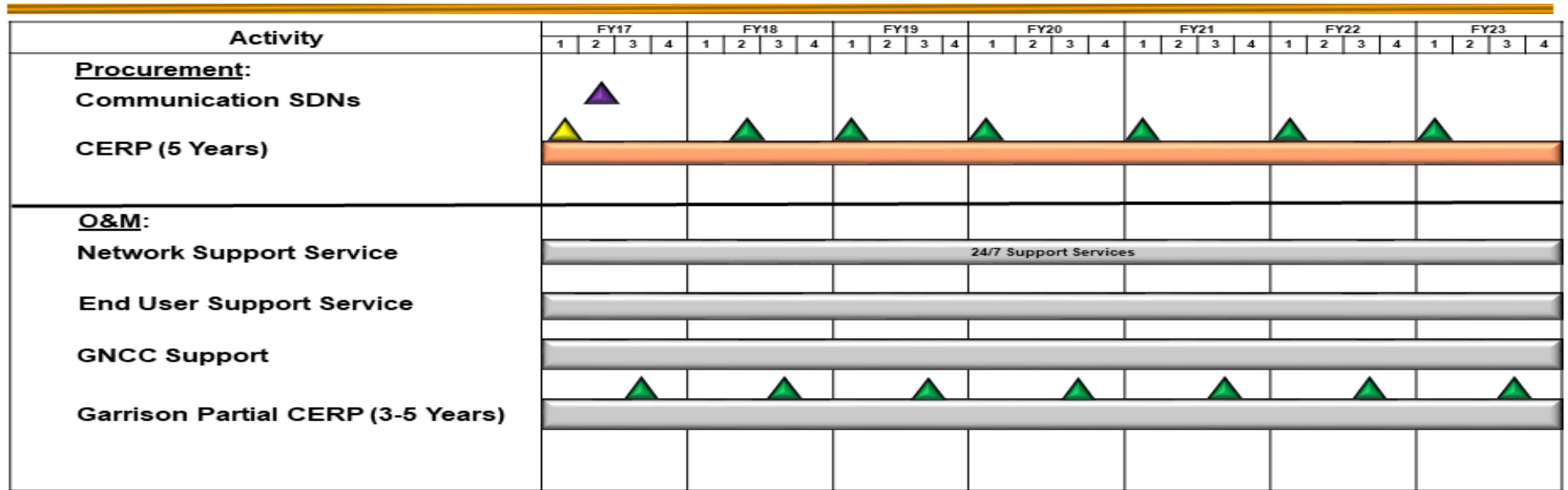
DCGS-SOF FMV Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>

DCGS-SOF Silent Dagger Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Distributed Common Ground/Surface Systems</i>				
Develop, integrate, and test emerging technologies and capabilities for Enterprise and ASIF enhancements to include: advanced analytics, user interface, disconnected operations into DCGS-SOF baseline	1	2017	4	2021
Develop, integrate, test next gen FMV PED tech, capabilities to include: language transl., upgrading imaging, video exploitation tools, voice-to-text transl., human detection and characterization	1	2017	4	2021
Develop, integrate, and test sharing of DCGS-SOF information with Coalition partners	1	2010	1	2021
Develop, integrate, and test next generation DCGS-SOF pipeline to automatically tag and geolocate data from ingested documents	1	2017	4	2021
Develop, integrate, and test SOF Data Layer (SDL) next generation to refine back end design and infrastructure	1	2019	4	2021
Develop, integrate, and test the next generation DCGS Distributed Framework (DDF) providing compliance with DISR/ICSR/DI2E content discovery and retrieval data standards and IdAM/PKI standards	1	2018	4	2021
Develop, integrate, and test the next generation DCGS-SOF Information Backbone to provide integration of services in to the DCGS-SOF Enterprise baseline	1	2018	4	2021
Limited Objective Events to test technology insertion capabilities across the Enterprise, ASIF, FMV PED, and Silent Dagger	1	2017	4	2021
Participate in Exercise events to include: Trident Spectre, Enterprise Challenge, Storm Force, and D12E Plugfest (annually); United Vision (even fiscal years)	1	2017	4	2021

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	63.298	17.155	37.863	18.403	-	18.403	20.793	21.361	19.522	19.912	Continuing	Continuing
S851: <i>MQ-9 Unmanned Aerial Vehicle (UAV)</i>	63.298	17.155	37.863	18.403	-	18.403	20.793	21.361	19.522	19.912	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF) - peculiar mission kits, mission payloads, weapons, and modifications on MQ-9 Unmanned Aerial Vehicles (UAVs), Ground Control Stations (GCSs), and training systems as a component of the Medium Altitude Long Endurance Tactical program. USSOCOM is designated as the DOD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations (OCO) against terrorist networks. USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This program element addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition, and Strike.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	17.804	37.863	14.259	-	14.259
Current President's Budget	17.155	37.863	18.403	-	18.403
Total Adjustments	-0.649	0.000	4.144	-	4.144
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.649	-			
• OTHER	-	-	4.144	-	4.144

Change Summary Explanation

Funding:

FY 2017: Decrease of -\$0.649 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs.

FY 2018: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1105219BB / <i>MQ-9 Unmanned Aerial Vehicle (UAV)</i>

FY 2019: Net increase of \$4.144 million is due to fact of life missions support to field and maintain SOF peculiar modifications (\$4.300 million) and a decrease of -\$0.156 million due to a Departmental economic assumption adjustment.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S851: MQ-9 Unmanned Aerial Vehicle (UAV)	63.298	17.155	37.863	18.403	-	18.403	20.793	21.361	19.522	19.912	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the supported combatant command in Overseas Contingency Operations (OCO), USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This project addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition and Strike.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: MQ-9 UAV	17.155	37.863	18.403
Description: Identifies, develops, integrates, and tests Special Operations Forces (SOF)-peculiar mission kits, mission payloads, weapons, and modifications on MQ-9 UAVs, ground control stations, and training systems.			
FY 2018 Plans: Develop, test, and integrate SOF-peculiar emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, GCSs, and training systems.			
FY 2019 Plans: Develops, tests, and integrates SOF-peculiar emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, GCSs, and training systems.			
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$19.304 million due to the MQ-9 program receiving FY 2018 funding to develop Automatic Takeoff & Landing and Global Positioning System Hardening technologies.			
Accomplishments/Planned Programs Subtotals	17.155	37.863	18.403

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/1108MQ9: MQ-9 Unmanned Aerial Vehicle	84.723	41.440	24.621	-	24.621	5.363	5.470	10.717	10.931	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

MQ-9 UAV implements an Agile acquisition approach for aircraft and Electro-Optical/Infrared (EO/IR) sensor Operational Flight Program (OFP) software development. Contract types include a mix of cost type and fixed priced. Proprietary issues with aircraft and EO/IR sensor OFP software and aircraft modification considerations dictate sole source contracts. MQ-9 UAV leverages service common Contractor Logistics Support (CLS) contracts for aircraft and ancillary equipment sustainment.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	26.383	10.421	Jun 2017	30.669	Jun 2018	14.698	Jun 2019	-		14.698	Continuing	Continuing	-
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	Raytheon : McKinney, TX	5.000	2.445	Jul 2017	2.500	Jul 2018	1.292	Jul 2019	-		1.292	Continuing	Continuing	-
Prior Years Completed Projects	Various	Various : Various	15.900	-		-		-		-		-	0.000	15.900	-
Subtotal			47.283	12.866		33.169		15.990		-		15.990	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	10.715	4.289	Jun 2017	4.694	Jun 2018	2.413	Jun 2019	-		2.413	Continuing	Continuing	-
Prior Years Completed Projects	Various	Various : Various	5.300	-		-		-		-		-	0.000	5.300	-
Subtotal			16.015	4.289		4.694		2.413		-		2.413	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract										
Project Cost Totals											63.298	17.155		37.863		18.403		-		18.403	Continuing	Continuing	N/A

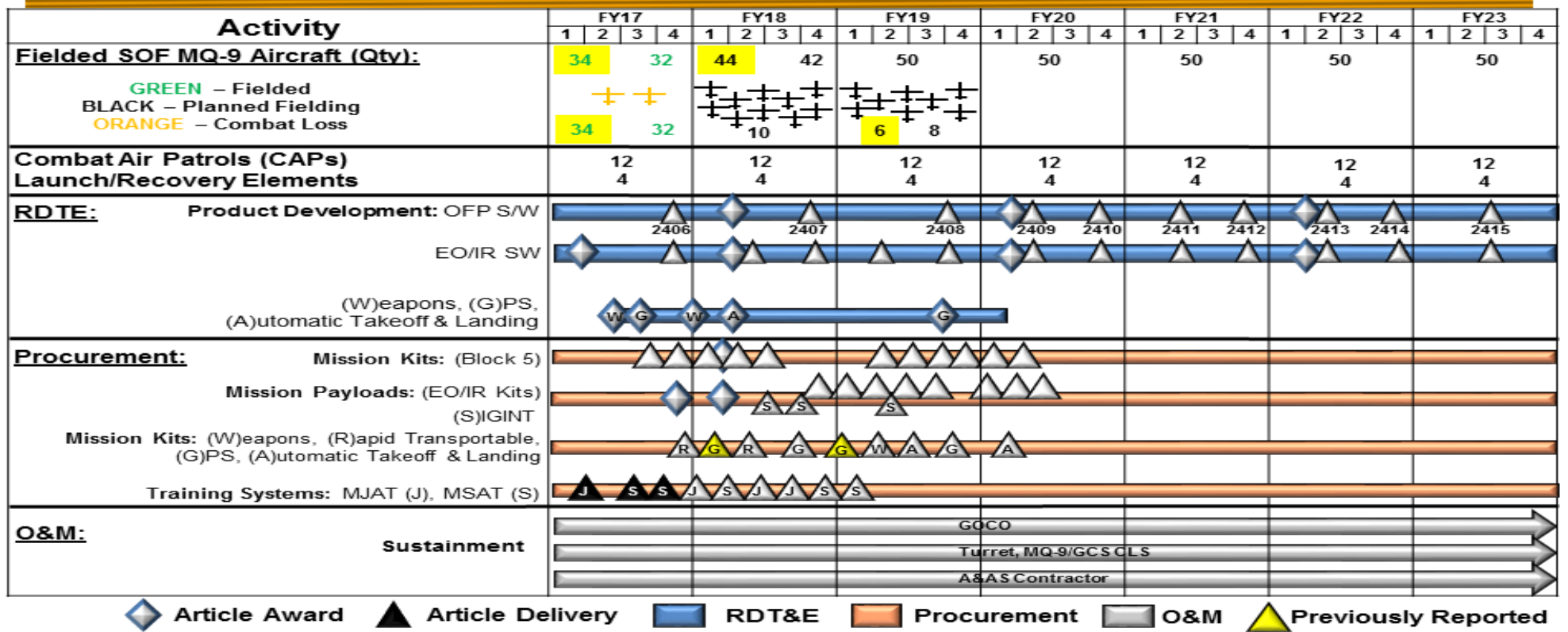
Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)
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MALET MQ-9 Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MQ-9 UAVs, GCSs, and Training Systems				
Operational Flight Program Software (SW)	1	2017	4	2023
Electro-optical/Infrared (EO/IR) Software (SW)	1	2017	4	2023
Weapons	2	2017	4	2019
Global Positioning System	3	2017	4	2019
Automated Takeoff and Landing	2	2018	2	2022

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	203.268	17.633	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S050: <i>Small Business Innovative Research</i>	198.145	15.459	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S051: <i>Small Business Technology Transfer</i>	5.123	2.174	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element consists of a highly competitive three-phase award system that provides qualified small businesses with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. Small Business Innovative Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal process. USSOCOM then awards its proposed SBIR projects. FY 2014 was the first year USSOCOM participated in the Small Business Technology Transfer (STTR) program. The STTR goal is similar to the SBIR program, but the STTR program has the additional goal to expand public/private sector partnerships between small business and nonprofit U.S. research institutions.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	17.633	0.000	0.000	-	0.000
Total Adjustments	17.633	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	17.633	-			

Change Summary Explanation

Funding:

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>

FY 2017: Increase of \$17.633 million is due to reprogramming from various program elements for the congressionally mandated Small Business Innovative Research (\$15.459 million) and Small Business Technology Transfer (\$2.174 million) programs.

FY 2018: None.

FY 2019: None.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovative Research</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S050: <i>Small Business Innovative Research</i>	198.145	15.459	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project consists of a highly competitive three-phase award system that provides qualified small businesses with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. Small Business Innovative Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal process. USSOCOM then awards its proposed SBIR projects.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: SBIR	15.459	-	-
Accomplishments/Planned Programs Subtotals	15.459	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

SBIR is a three-phase program that provides early-stage Research and Development (R&D) to small companies. Eligible projects must fulfill an R&D need identified by DOD and have the potential to be developed into a product or service for commercial or defense markets. SBIR is designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D and foster participation by minority and disadvantaged firms in technological innovation.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command											Date: February 2018		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>				Project (Number/Name) S050 / <i>Small Business Innovative Research</i>					

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Phase I <\$150K	C/Various	Various : Various	-	8.078	Jan 2017	-		-		-		-	Continuing	Continuing	-
Phase II >\$750K	C/Various	Various : Various	-	7.015	Jan 2017	-		-		-		-	Continuing	Continuing	-
Pilot Admin Fund	C/Various	Various : Various	-	0.366	Apr 2017	-		-		-		-	Continuing	Continuing	-
Prior Year Funding	C/Various	Various : Various	198.145	-		-		-		-		-	Continuing	Continuing	-
Subtotal			198.145	15.459		-		-		-		-	Continuing	Continuing	N/A

Remarks
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Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	198.145	15.459	0.000	-	-	-	Continuing	Continuing	N/A

Remarks
Due to multiple awards, the dates listed above reflect the last Phase I and II awarded

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command			Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovative Research</i>	

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>Small Business Innovative Research</i>																												
Phase I Efforts																												
Phase II Efforts																												
Pilot Admin Fund																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S050 / <i>Small Business Innovative Research</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Small Business Innovative Research</i>				
Phase I Efforts	2	2017	2	2018
Phase II Efforts	2	2017	2	2018
Pilot Admin Fund	3	2017	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S051 / <i>Small Business Technology Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S051: <i>Small Business Technology Transfer</i>	5.123	2.174	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Small Business Technology Transfer (STTR) goal is to expand public/private sector partnerships between small business and nonprofit U.S. research institutions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: STTR	2.174	-	-
Accomplishments/Planned Programs Subtotals	2.174	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

STTR provides early-stage R&D funding directly to small companies working cooperatively with researchers at universities and other research institutions. STTR program is also a three-phased program and designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D and foster participation by minority and disadvantaged firms in technological innovation.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command			Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S051 / <i>Small Business Technology Transfer</i>	

FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

*** SMALL BUSINESS TECHNOLOGY TRANSFER ***	
Phase II Efforts	

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>	Project (Number/Name) S051 / <i>Small Business Technology Transfer</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
*** SMALL BUSINESS TECHNOLOGY TRANSFER ***				
Phase II Efforts	2	2017	2	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	903.435	156.054	259.886	184.993	-	184.993	137.242	120.290	98.819	99.664	Continuing	Continuing
SF100: <i>Aviation Systems Advanced Development</i>	709.490	100.429	175.543	118.028	-	118.028	51.144	30.170	12.874	3.952	Continuing	Continuing
SF200: <i>CV-22</i>	2.993	0.651	14.259	22.344	-	22.344	28.211	10.139	9.672	18.000	Continuing	Continuing
S750: <i>Mission Training and Preparation Systems</i>	19.647	6.745	8.181	7.520	-	7.520	8.635	9.673	9.596	9.788	Continuing	Continuing
S875: <i>AC/MC-130J</i>	29.906	8.020	9.351	17.091	-	17.091	23.900	52.613	54.103	55.122	Continuing	Continuing
D615: <i>Rotary Wing Aviation</i>	141.399	40.209	52.552	20.010	-	20.010	25.352	17.695	12.574	12.802	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 212

A. Mission Description and Budget Item Justification

SF100 Aviation Systems Advanced Development:

This project provides for the development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation and training requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: SOF specific avionics; Low Probability of Intercept/Low Probability of Detection Terrain Following/Terrain Avoidance (TF/TA) radar; Defensive Countermeasures; Electronic Warfare (EW) - Radio Frequency Countermeasures (RFCM); Precision Strike Package (PSP); PSP High Energy Laser; AC-130H/W/U and MC-130E/H/P, AC-130W, and AC-130U Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Airborne Mission Networking; near real-time Intelligence, Surveillance and Reconnaissance (ISR); data fusion; threat detection and avoidance; navigation, target detection, and identification technologies; weapons integration; digital broadcast capabilities; aerial refueling; survivability; and ISR payload technological improvements with size, weight, power and integration onto all SOF unmanned aircraft system (UAS) ISR platforms.

SF200 CV-22 Development/Test and Evaluation:

The CV-22 is a SOF variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this project supports integration, design, development, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, ISR, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. CV-22 SOF Common TF/TA radar best known as Silent Knight Radar (SKR) or APQ-187, provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infill, exfill, and resupply SOF forces. Provides more sustainable/capable replacement to obsolescing and tech limited terrain following/avoidance radar. There is a plan to develop a Defensive Weapon System (DWS) that gives a ~360 degree field of fire to suppress/eliminate enemy targets. This effort integrates the SOF unique Color Helmet Mounted Display (CHMD) with DWS providing necessary capability improvements identified during operational use and interim contract support.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>
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S750 Mission Training and Preparation Systems:

The Special Operations Mission Planning and Execution (SOMPE) project funds the definition, design, development, prototyping, integration, and testing of SOMPE systems to support mission planning, rehearsal, and execution requirements to meet SOF-unique mission requirements and correct deficiencies in current mission planning, rehearsal, and execution capabilities. The Mission Training and Preparation Systems project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse mission planning, rehearsal, and execution systems.

S875 AC/MC-130J:

The AC/MC-130J project funds core SOF-unique modifications to replace aging/retired AC-130H Spectre, AC-130W Stinger II, AC-130U Spooky, MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the PSP to achieve the AC-130J configuration. The AC-130J aircraft will provide close air support, air interdiction, and armed reconnaissance capability. The 14 MC-130E Talon I, 23 MC-130P Combat Shadow, and 20 MC-130H Talon II airframes will be replaced by MC-130J Commando II aircraft with SOF mission modifications. The MC-130J Commando II aircraft perform clandestine or low visibility, single or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; and airdrop of leaflets, insert small special operations teams, resupply bundles and combat rubber raiding craft. The Air Force procures and fields the basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to integrate SOF capabilities onto the aircraft and training systems. SOF capabilities include, but are not limited to, Airborne Mission Networking, data fusion, threat detection and avoidance, integrated terrain following/terrain avoidance, electronic warfare, and embedded training. Integrating and automating SOF mission systems that deliver these capabilities is critical to fielding SOF-capable AC/MC-130J aircraft to recapitalize Air Force Special Operations Command's legacy C-130 fleet.

D615 Rotary Wing Aviation:

This project develops SOF-unique modifications and upgrades to SOF rotary wing aircraft that operate in increasingly hostile environments. This project also includes modifications to Aircraft Survivability Equipment (ASE) and weapons systems to counter rapidly emerging threats, improve lethality and improve aircraft self-protection in contested environments. Rotary wing aircraft supported by this project include: MH-60M, MH-47G, and A/MH-6M. These aircraft provide aviation support to SOF in worldwide contingency operations and low-intensity conflicts. They must be capable of rapid deployment, undetected penetration of hostile areas, and operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The anti-access/area denial (A2/AD) threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	163.543	259.886	177.606	-	177.606
Current President's Budget	156.054	259.886	184.993	-	184.993
Total Adjustments	-7.489	0.000	7.387	-	7.387
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-0.890	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.671	-			
• SBIR/STTR Transfer	-5.928	-			
• Other	-	-	7.387	-	7.387

Change Summary Explanation

Funding:

FY 2017: Net decrease of -\$7.489 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs (-\$5.928 million), a congressional reduction for prior year carryover for SOMPE (-\$0.890 million), and a decrease for higher command priorities (-\$0.671 million).

FY 2018: None.

FY 2019: Net increase of \$7.387 million is for completion of Phase III integration, testing, and Air Worthiness Release (AWR) for the A/MH-6 Block 3.0 Upgrade (\$3.120 million); to complete development and testing of trial kit installation of EC-130J Block Upgrade (\$1.263 million); testing of flares and chaff to address emerging threats for RW ASE Upgrades (\$4.192 million); flight qualification and AWR testing of the Degraded Visual Environment solution (\$3.222 million); continues PSP High Energy Laser (HEL) development of system architecture, acquire beam director subsystem and laser subsystem, interface control documentation, and completes risk reduction for AC-130J aircraft (\$30.020 million); continues integration/testing of CV-22 SF Common TF/TA (Silent Knight) Radar (\$0.898 million); higher command priorities (-\$4.024 million); a Departmental economic assumption adjustment (-\$1.482 million); and the FY 2019 funding request was reduced by -\$29.822 million to account for the availability of prior year execution balances.

Schedule: Silent Knight Radar (SKR): Hardware failures with first 3 LRIP IIA radars delivered delayed Regression Testing and have delayed Initial Operational Test for the MH-60/MH-47 into 4th Quarter FY 2018. EC-130J SOF-Unique 7.0/8.1 development delay was due to a delay in the 7.0/8.1 Air Force modification contract.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
SF100: Aviation Systems Advanced Development	709.490	100.429	175.543	118.028	-	118.028	51.144	30.170	12.874	3.952	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the investigation, evaluation, development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation and training requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: SOF specific avionics; low probability of intercept/low probability of detection (LPI/LPD), terrain following/terrain avoidance (TF/TA) radar; Defensive Countermeasures (DCM) which includes Electronic Warfare – Radio Frequency Countermeasures (EW-RFCM); Precision Strike Package (PSP); AC-130H, AC-130W, and AC-130U recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Airborne Mission Networking (AbMN); near-real-time intelligence to include data fusion, threat detection and avoidance; navigation, target detection and identification technologies; digital broadcast capability; aerial refueling; Survivability; and Intelligence, Surveillance, and Reconnaissance (ISR) payload technological improvements with size, weight, power and integration onto all SOF UAS ISR platforms.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: EC-130J Upgrades	5.161	-	1.252	-	1.252
Description: EC-130J Upgrades provides for integration of SOF-unique implementation of the C-130J block cycle upgrade to be installed on the EC-130J Commando Solo aircraft and development of digital broadcast capabilities.					
FY 2019 Base Plans: Develops a risk reduction plan for delayed development.					
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.252 million is to develop a risk reduction plan for delayed development.					
Title: EC-130J Commando Solo	-	-	1.179	-	1.179
Description: EC-130J Commando Solo supports development, integration and testing of digital broadcast capabilities on the EC-130J Commando Solo aircraft.					
FY 2019 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Develops and integrates emerging digital broadcast and antenna technologies into the Removable Airborne Military Information Support Operations (MISO) System (RAMS) Program.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.179 million supports development and integration of emerging digital broadcast and antenna technologies into the RAMS program.</p>					
<p>Title: EW – RFCM</p> <p>Description: EW-RFCM supports development, integration and test activities to provide EW capability against RF threats for SOF AC/MC-130J aircraft. The Defensive Countermeasures (DCM) suite is an integrated package of existing and future aircraft defensive systems which provides situational awareness and threat response processing that includes the RFCM system, and future defensive systems. The RFCM program provides SOF-unique aircraft defensive capabilities required for SOF missions.</p> <p>FY 2018 Plans: Complete fabrication, assembly and contractor hardware/software qualification testing for 5 Group A and 4 Group B systems. Continue integration and testing. Begin Government developmental ground, developmental flight and operational test activities to provide EW capability against RF threats for SOF AC/MC-130J aircraft.</p> <p>FY 2019 Base Plans: Continues integration and testing. Continues Government developmental and operational flight test activities to provide EW capability against RF threats for SOF AC/MC-130J aircraft.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$47.816 million supports the completion of fabrication & assembly and contractor qualification testing in FY 2018.</p>	44.818	57.248	9.432	-	9.432
<p>Title: PSP for SOF</p> <p>Description: PSP for SOF supports systems engineering, analysis, development, and enhancement of the baseline PSP and integration, installation, and test on host MC-130J aircraft provided by the U.S. Air Force for the AC-130H, AC-130W and AC-130U recapitalization, as well as current SOF AC-130Js and AC-130Ws, and other SOF platforms. Missions for the AC-130 aircraft include, but are not limited to, Close Air Support, Air Interdiction, and Armed Reconnaissance. PSP is modular, scalable, and platform neutral.</p> <p>FY 2018 Plans:</p>	9.919	13.512	18.354	-	18.354

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Continue development, integration, test, and system improvement of the PSP, to include defensive systems, EO/IR sensors and adverse weather capabilities on SOF C-130s and other SOF aircraft.</p> <p>FY 2019 Base Plans: Continues development, integration, test, and system improvement of the PSP, to include defensive systems, EO/IR sensors, adverse weather and special mission processor capabilities on SOF C-130s and other SOF aircraft.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$4.842 million is for the development, integration, test, and system improvement of all-weather capabilities of the PSP on SOF C-130s and other SOF aircraft.</p>					
<p>Title: PSP High Energy Laser (HEL)</p> <p>Description: The HEL demonstration will integrate a next generation Directed Energy Weapon System onto an AC-130. The effort demonstration will integrate mature laser sub-systems, (Beam Director, Laser, Thermal, and Power) to develop a prototype system. The prototype will be utilized for an operational evaluation and inform future requirements. The HEL components will be designed for modular upgrades and integrated with the PSP system.</p> <p>FY 2018 Plans: Develop system architecture, design trades, interface control documentation, and risk reduction for AC-130J aircraft.</p> <p>FY 2019 Base Plans: Continues development of system architecture, acquire beam director subsystem and laser subsystem, interface control documentation, and completes risk reduction for AC-130J aircraft.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$18.336 million to complete purchase of prototype laser and beam director subsystems.</p>	-	15.650	33.986	-	33.986
<p>Title: C-130 SOF Common TF/TA (Silent Knight) Radar</p> <p>Description: C-130 SOF Common TF/TA (Silent Knight) Radar supports integration and test of a TF/TA radar and on-board processor to provide a multi-mode terrain following capability on MC-130J aircraft. Crew systems integration efforts include modifications to aircraft controls and displays to automate TF/TA flight management</p>	32.875	87.530	51.355	-	51.355

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
and reduce pilot, copilot and Combat Systems Officer workload during missions previously performed by five aircrew members on legacy C-130 tankers and penetrators.					
<p>FY 2018 Plans: Continue SOF Common TF/TA (Silent Knight) radar and aircraft control and display integration efforts. Install TF radar system kits on two MC-130Js and begin MC-130J TF/TA developmental flight test. Begin training system development. Begin developing software for safety critical capabilities.</p> <p>FY 2019 Base Plans: Continues SOF Common TF/TA (Silent Knight) radar and aircraft control and display integration efforts. Installs TF radar system kits on a third MC-130J and continues MC-130J TF/TA developmental flight test. Continues training system development. Develops hardware and software for safety critical capabilities and integration issues on the Silent Knight Radar.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$36.175 million is due to completion of two MC-130J TF/TA radar installs and ramp down of TF/TA controls and display software.</p>					
<p>Title: SOF Common TF/TA (Silent Knight) Radar</p> <p>Description: SOF Common TF/TA (Silent Knight) Radar supports Engineering and Manufacturing Development (EMD), qualification, and operational flight testing of a SOF common TF/TA LPI/LPD radar to defeat advanced passive detection threats while maintaining ability to fly safe TF. The funding also supports design, development, integration, and testing for improved system capabilities to include, but not limited to, Aircraft Survivability Equipment (ASE) interoperability improvements and reduced TF signature management. This radar is targeted for use on MH-47G heavy assault helicopters, MH-60M medium assault helicopters, MC-130J Commando II and CV-22 Osprey aircraft.</p> <p>FY 2019 Base Plans: Begins design, development, integration, and testing of Silent Knight Radar ASE interoperability improvements and sensor fusion TF initiatives.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.212 million for design, development, integration, and testing of Silent Knight Radar ASE interoperability improvements and reduced TF signature management initiatives.</p>	6.227	-	1.212	-	1.212
<p>Title: ISR Payload</p>	1.429	1.603	1.258	-	1.258

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Description: ISR Payload Sensor Technology supports development, integration, and testing of sensor miniaturization efforts to adapt large (Group 4-5) unmanned aircraft system (UAS) ISR capabilities on all SOF UAS ISR platforms.</p> <p>FY 2018 Plans: Continue spiral development to increase the smaller SOF ISR platforms' capabilities through incremental development, integration, and testing.</p> <p>FY 2019 Base Plans: Continues spiral development to increase the smaller SOF ISR platforms' capabilities through incremental development, integration, and testing.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.345 million is due to higher command priorities.</p>					
Accomplishments/Planned Programs Subtotals	100.429	175.543	118.028	-	118.028

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/5000C13000: <i>C-130 Modifications</i>	42.942	31.809	80.274	-	80.274	21.730	21.233	16.164	16.487	Continuing	Continuing
• PROC/2012C130J: AC/MC-130J	68.333	179.934	165.813	-	165.813	170.323	180.730	221.927	285.871	Continuing	Continuing
• PROC/1202PSP: <i>Precision Strike Package</i>	227.882	229.728	226.965	-	226.965	228.510	232.704	148.680	66.870	Continuing	Continuing
• PROC0201RWUPGR: <i>Rotary Wing Upgrades and Sustainment</i>	164.596	158.988	148.351	-	148.351	143.788	149.300	152.009	155.215	Continuing	Continuing

Remarks

D. Acquisition Strategy

- EC-130J Upgrades: Operational Flight Program Block Cycle is being developed by the Air Force program office using existing development and production contracts.
- EC-130J Commando SOLO: Digital broadcast capabilities are being developed through an incremental acquisition strategy to incorporate and test readily available equipment into the EC-130J aircraft.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF100 / <i>Aviation Systems Advanced Development</i>

- EW – RFCM: Awarded competitive EMD contract for development. Down selected to the best overall solution to integrate and test an RFCM System on AC/MC-130J aircraft.
- PSP for SOF: Incremental acquisition strategy to integrate and test the PSP and capability enhancements on donor MC-130J aircraft provided by the U.S. Air Force and other SOF aircraft. Multiple contract awards.
- PSP HEL: AC-130 HEL program utilizes Naval Surface Warfare Center Dahlgren Division as the government Lead System Integrator of HEL components. HEL system components purchased under Defense Ordinance Technology Consortium broad area announcement using incremental Cost Plus Fixed Fee contracts and cost sharing agreements.
- C-130 SOF Common TF/TA (Silent Knight) Radar: Awarded delivery order on Cost Plus Incentive Fee contract to integrate and test the SOF Common TF/TA (Silent Knight) radar on MC-130J aircraft and develop modifications to aircraft displays and controls. Government developmental test and evaluation, FY 2018 - FY 2020; Operational Test and Evaluation, FY 2021; Required Assets Available, Q1FY2022.
- SOF Common TF/TA (Silent Knight) Radar: Competitive EMD contract was awarded to Raytheon in FY 2007 for radar B Kit design, development, and testing. Subsequent MH-47G and MH-60M A Kit design, integration, and test efforts awarded to Lockheed Martin (SOFSA). Cost Plus Fixed Fee (CPFF) awarded to Raytheon in January 2017 for software development of Software Version (SW ver) 7.14 (outcome of 2017 Limited Users Test). Continued software development to enhance interoperability with other on aircraft systems in FY18/19 followed by operational capability additions and move to sensor fusion TF FY20-24.
- ISR Payload Sensor Technology: Effort is being executed via a spiral development, integration and testing acquisition strategy based on leveraging existing sensor technology. The focus will be on reducing the size, weight, power and cost of state of the art ISR sensors fielded on larger ISR platforms, such as Group 4-5 unmanned aircraft systems (UAS), in order to make them usable by smaller SOF ISR platforms, such as Group 2-3 UAS. This development will include the integration of the ISR capability with the platform's C2 and Communications systems as appropriate.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EC-130J Upgrades	C/CPIF	Lockheed Martin : Marietta, GA	5.811	5.161	Dec 2016	-		1.252	Dec 2018	-		1.252	0.000	12.224	-
EC-130J Commando Solo Removable Airborne Military Information Support Operations System (RAMS)	C/CPFF	Johns Hopkins University APL : Baltimore, MD	3.396	-		-		1.179	Mar 2019	-		1.179	0.000	4.575	-
Electronic Warfare - Radio Frequency Countermeasures (EW-RFCM)	C/CPIF	BAE Systems, Inc. : Totowa, NJ	55.925	41.918	Jan 2017	41.133	Jan 2018	1.003	Jan 2019	-		1.003	Continuing	Continuing	-
Precision Strike Package (PSP) for SOF - CSO Station	C/FFP	Various : Various	-	3.607	Jan 2017	-		-		-		-	Continuing	Continuing	-
PSP for SOF - Situational Awareness	C/FFP	Various : Various	-	4.825	Jan 2017	-		-		-		-	Continuing	Continuing	-
PSP for SOF - Defensive Systems	C/TBD	Various : Various	-	-		4.845	Jan 2018	2.085	Jan 2019	-		2.085	0.000	6.930	-
PSP for SOF - EO/IR Sensor	C/TBD	Various : Various	-	-		0.705	Jan 2018	1.889	Jan 2019	-		1.889	Continuing	Continuing	-
PSP for SOF - Adverse Weather	C/TBD	Various : Various	-	-		6.057	Jan 2018	10.575	Jan 2019	-		10.575	Continuing	Continuing	-
PSP for SOF - SMP/PSP Integration	C/TBD	Various : Various	-	-		-		1.202	Jan 2019	-		1.202	Continuing	Continuing	-
PSP High Energy Laser (HEL) - High Power Beam Director	C/CPFF	MZA Associates Corporation : Albuquerque, NM	-	-		8.000	Mar 2018	4.000	Feb 2019	-		4.000	0.000	12.000	-
PSP HEL - Prototype Integration, Power, Isolation Structure	C/CPFF	Naval Surface Warfare Center : Dahlgren, VA	-	-		3.000	Mar 2018	7.136	Jan 2019	-		7.136	Continuing	Continuing	-
PSP HEL - High Power Laser	C/CPFF	TBD : TBD	-	-		4.650	Apr 2018	22.850	Feb 2019	-		22.850	0.000	27.500	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Lockheed Martin Aero : Marietta, GA	76.499	24.296	Jan 2017	71.821	Jan 2018	36.894	Jan 2019	-		36.894	Continuing	Continuing	-
Intelligence, Surveillance, and Reconnaissance Payload	TBD	Various : Various	1.288	1.495	Apr 2017	1.603	Apr 2018	1.258	Apr 2019	-		1.258	Continuing	Continuing	-
SOF Common TF/TA (Silent Knight) Radar	C/FFP	Raytheon : Forest, MS	-	3.898	Jan 2017	-		-		-		-	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	313.802	-		-		-		-		-	0.000	313.802	-
Subtotal			456.721	85.200		141.814		91.323		-		91.323	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	6.949	3.358	Dec 2016	7.305	Dec 2017	3.811	Dec 2018	-		3.811	Continuing	Continuing	-
EW-RFCM	C/Various	Robins AFB : Warner Robins, GA	14.164	2.155	May 2017	3.820	Jan 2018	2.182	Jan 2019	-		2.182	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	28.802	-		-		-		-		-	0.000	28.802	-
Subtotal			49.915	5.513		11.125		5.993		-		5.993	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EW-RFCM	C/Various	Robins AFB : Warner Robins, GA	4.165	0.700	Feb 2017	12.295	Jan 2018	6.247	Jan 2019	-		6.247	Continuing	Continuing	-
PSP for SOF	C/Various	Various : Various	18.740	1.487	Dec 2016	1.905	Dec 2017	2.603	Dec 2018	-		2.603	Continuing	Continuing	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	13.431	3.455	Dec 2016	6.441	Dec 2017	9.372	Dec 2018	-		9.372	Continuing	Continuing	-
SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	119.565	2.179	Jan 2017	-		1.212	Jan 2019	-		1.212	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	8.903	-		-		-		-		-	0.000	8.903	-
Subtotal			164.804	7.821		20.641		19.434		-		19.434	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	7.034	1.745	Dec 2016	1.963	Dec 2017	1.278	Dec 2018	-		1.278	Continuing	Continuing	-
SOF Common TF/TA (Silent Knight) Radar	C/Various	Various : Various	-	0.150	Oct 2016	-		-		-		-	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	31.016	-		-		-		-		-	0.000	31.016	-
Subtotal			38.050	1.895		1.963		1.278		-		1.278	Continuing	Continuing	N/A

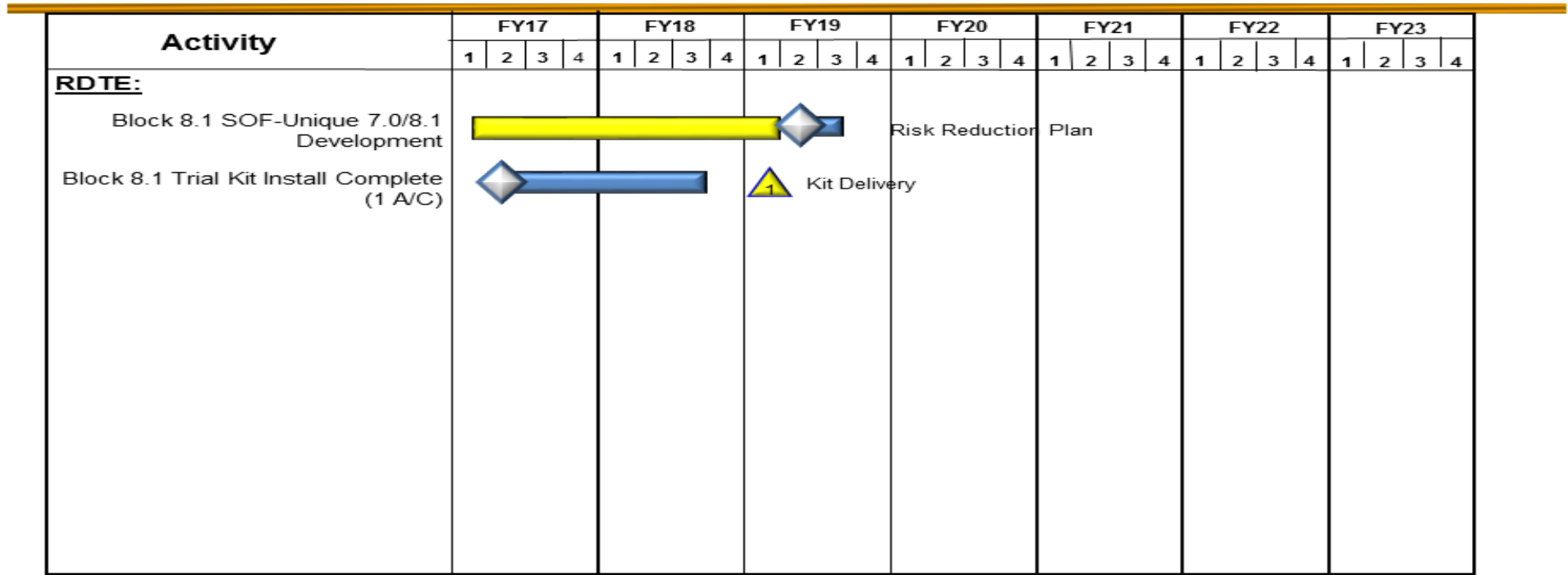
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		709.490	100.429	175.543	118.028	-	118.028	Continuing	Continuing	N/A

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

EC-130J Upgrade Schedule

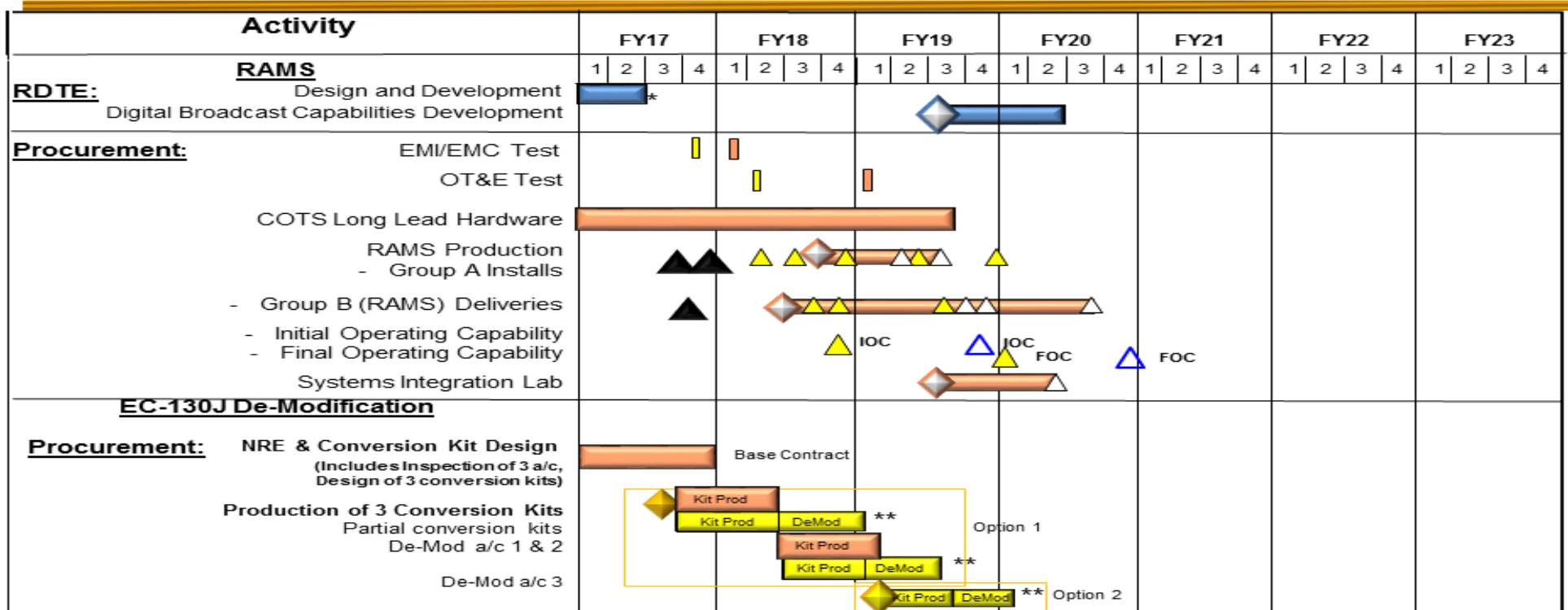


Contract Award
 Article Delivery
 RDTE
 Procurement
 O&M
 Previously Reported

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

EC-130J CSOLO RAMS and De-Mod Schedule

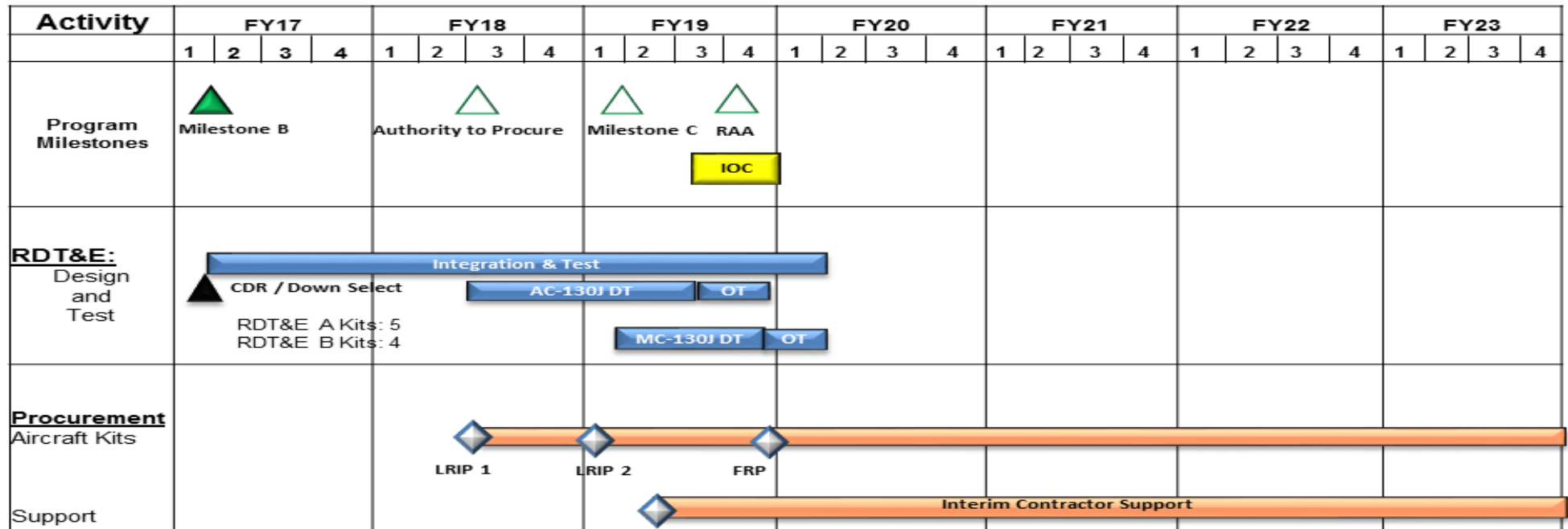


◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported
 * Funded with FY15/16 RDTE
 ** De-Mod Program Delayed to accommodate RAMS development delay.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

AC/MC-130J RFCM Schedule

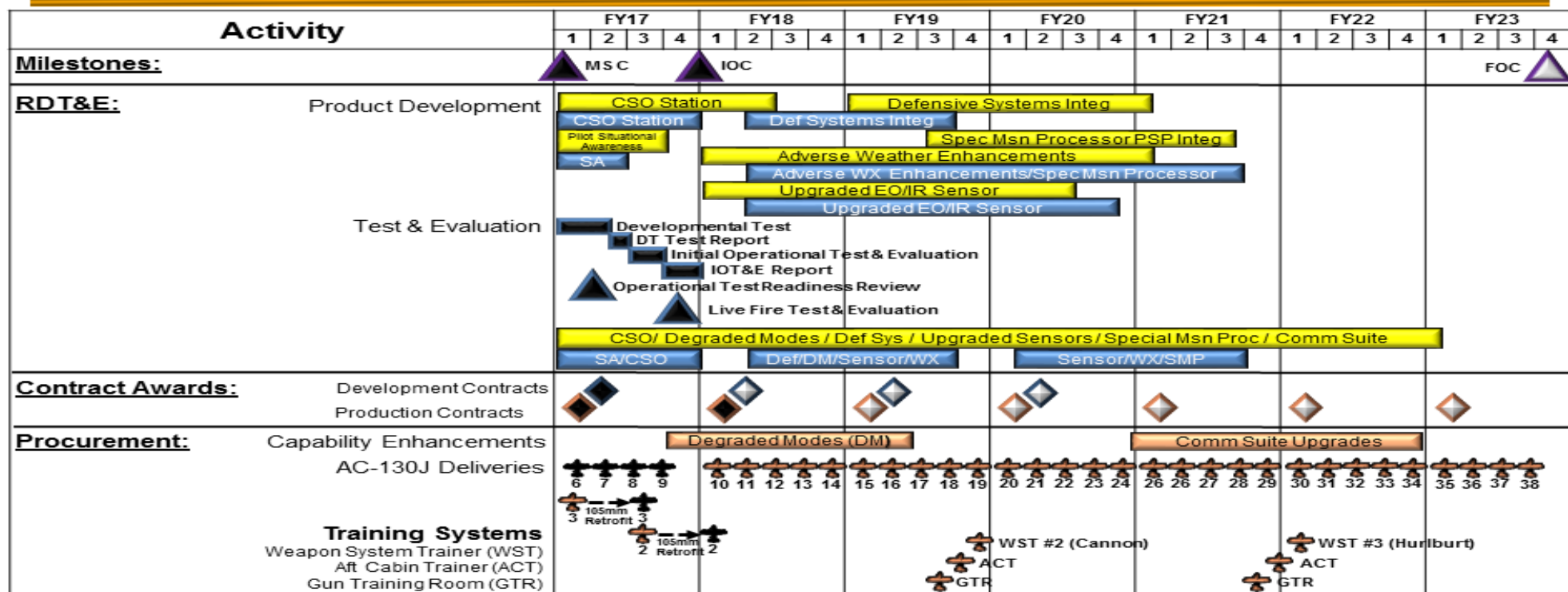


▲ Milestone ◆ Contract Award ▲ Article Delivery ■ RDT&E ■ Procurement ■ O&M ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

AC-130J/PSP Schedule



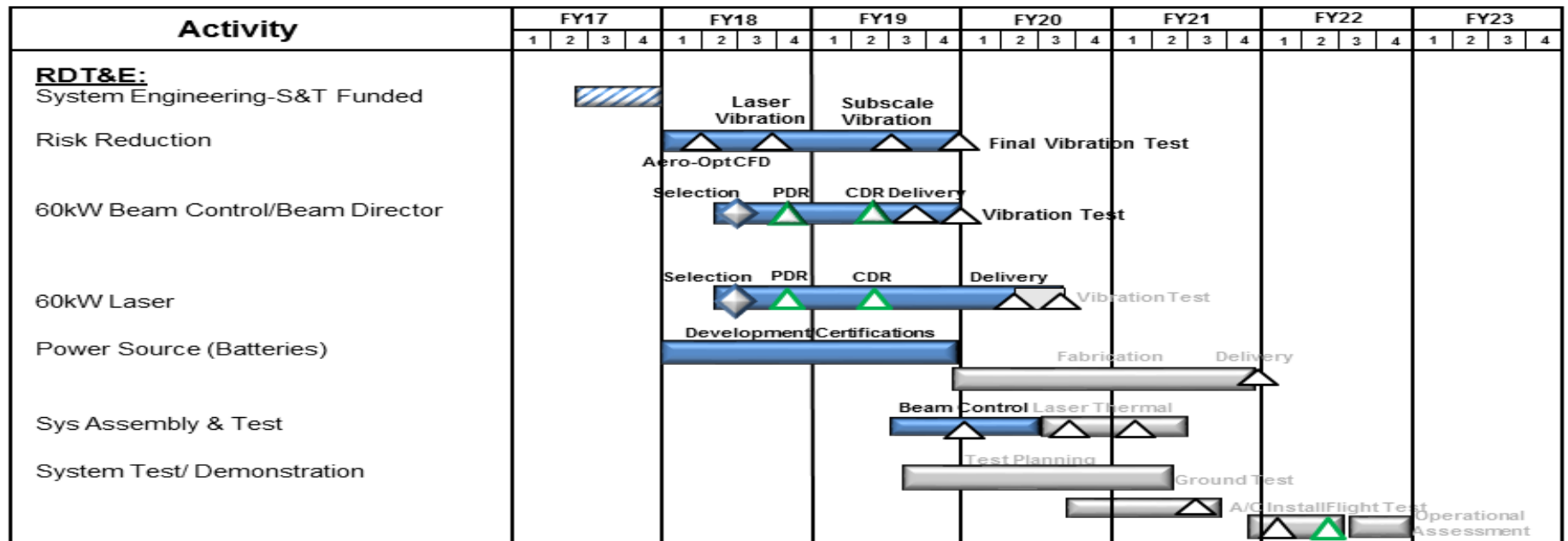
Milestones
 Contract Award
 Article Delivery
 RDT&E
 Procurement
 Previously Reported

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

AC-130 High Energy Laser Schedule

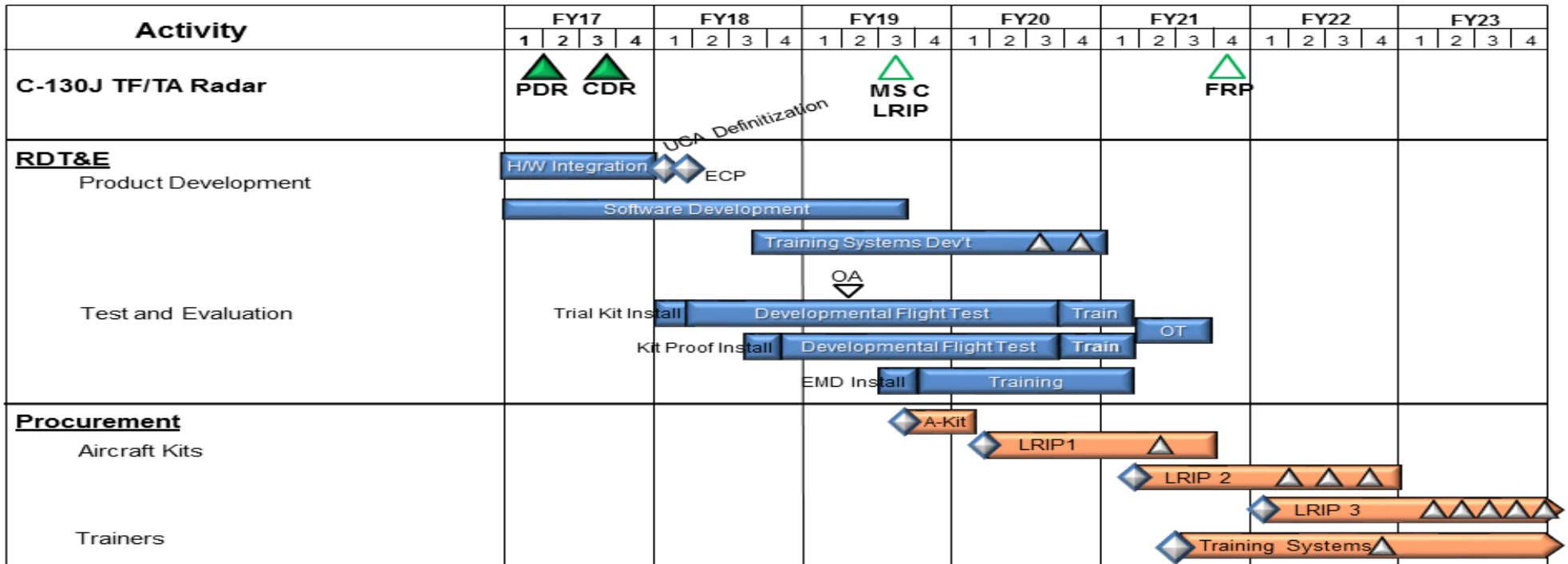


▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 RDT&E
 Procurement
 O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

C-130 SOF Common TF/TA Radar Schedule

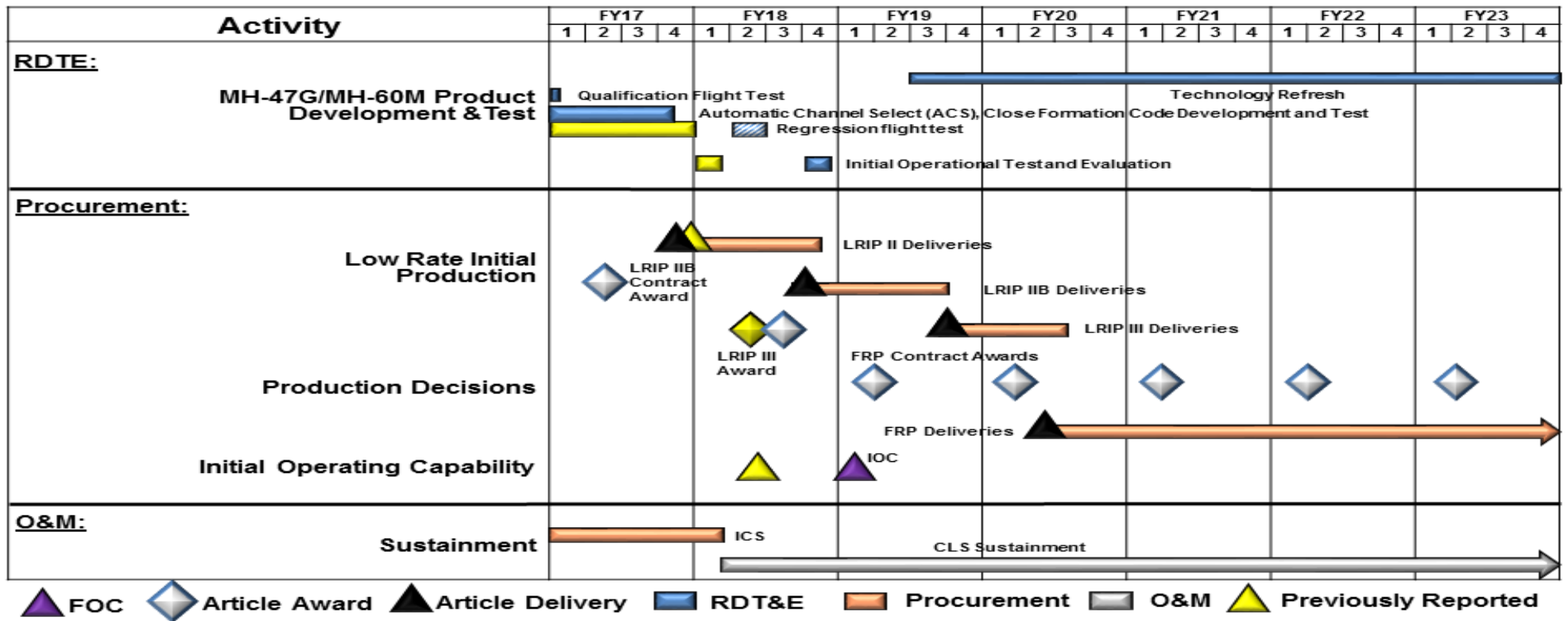


▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 RDT&E
 Procurement
 O&M
 ▲ Previously Reported

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

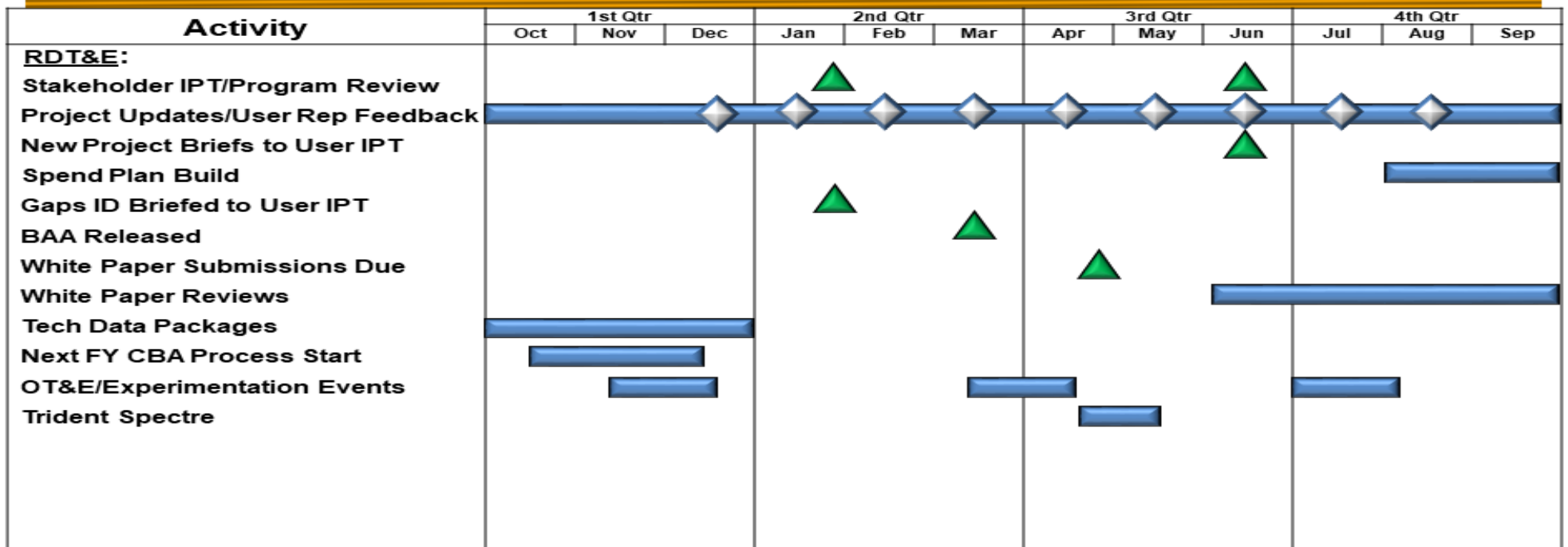
SOF Common (Silent Knight) TF/TA Radar Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

ISR Payload Sub-Project Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF100 / <i>Aviation Systems Advanced Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
EC-130J Upgrades				
Block 8.1 Development and Trial Kit Install	1	2017	1	2021
EC-130J Commando Solo Removeable Airborne Military Information Support Operations System (RAMS)				
Development and Design	2	2019	2	2020
Electronic Warfare - Radio Frequency Countermeasures (EW-RFCM)				
Integration and Testing	2	2017	2	2020
Precision Strike Package (PSP) for SOF				
Block 20 Developmental Test/Initial Operational Test and Evaluation	1	2017	3	2017
Capability Enhancements Product Development	2	2017	4	2022
Capability Enhancements Test and Evaluation	1	2017	4	2023
PSP High Energy Laser (HEL)				
PSP HEL Risk Reduction Demonstration	2	2017	1	2020
PSP HEL Prototype Demonstration and Operator Evaluation	2	2018	4	2022
C-130 SOF Common Terrain Following/Terrain Avoidance (TF/TA) (Silent Knight) Radar				
Software Development	2	2017	3	2019
Development/Flight Testing	4	2018	3	2020
Operational Testing	2	2021	3	2021
Training System Development	1	2018	1	2021
SOF Common (TF/TA) (Silent Knight) Radar				
Qualification, Automatic Channel Select, Close Formation Code & Regression Flight Testing	1	2017	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF100 / <i>Aviation Systems Advanced Development</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Operational Testing	2	2018	2	2018
Aircraft Survivability Equipment interoperability and reduced Terrain Following signature management initiatives	1	2019	4	2023
<i>Intelligence, Surveillance, and Reconnaissance (ISR) Payload</i>				
Payload Development	3	2017	4	2023
Payload Integration (Phase 1)	1	2018	2	2019
Payload Integration (Phase 2)	4	2020	1	2022
Payload Testing (Phase 1)	2	2019	3	2019
Payload Testing (Phase 2)	1	2022	2	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>				Project (Number/Name) SF200 / CV-22			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
SF200: CV-22	2.993	0.651	14.259	22.344	-	22.344	28.211	10.139	9.672	18.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 212

A. Mission Description and Budget Item Justification

The CV-22 is a SOF variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this program supports integration, design, development, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, ISR, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV-22 platform.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in situational awareness, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform.

CV-22 SF Common TF/TA (Silent Knight) Radar: Provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infiltration, exfiltration, and resupply SOF forces. Provides more sustainable/capable radar to replace obsolescing and APQ-186 terrain following/avoidance radar.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: CV-22 SOF Common TF/TA (Silent Knight) Radar	0.651	14.259	22.344	-	22.344
Description: Provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infil, exfil, and resupply SOF forces. Provides more sustainable/capable radar to replace obsolescing and tech limited APQ-186 terrain following/avoidance radar.					
FY 2018 Plans: Continue integration/testing of the CV-22 SF Common TF/TA (Silent Knight) Radar.					
FY 2019 Base Plans: Continues integration/testing of CV-22 SF Common TF/TA (Silent Knight) Radar.					
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$8.085 million is to support developmental flight testing.					
Accomplishments/Planned Programs Subtotals	0.651	14.259	22.344	-	22.344

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF200 / CV-22
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/1000CV22: <i>CV-22 SOF Modification</i>	47.786	42.178	32.529	-	32.529	27.491	31.285	56.535	50.918	Continuing	Continuing
• PROC/V022A0: <i>Aircraft Procurement CV-22 (MYP)</i>	97.000	-	-	-	-	-	-	-	-	0.000	4,415.234
• RDT&E1/0401318F: <i>RDT&E, USAF</i>	27.704	22.519	16.641	-	16.641	14.731	14.985	15.293	15.600	64.350	225.577
• RDT&E/0604262N: <i>V-22 RDT&E, N BA-05</i>	149.113	171.386	135.522	-	135.522	134.939	93.363	117.119	119.461	184.398	1,105.301

Remarks

D. Acquisition Strategy

The Silent Knight Radar (SKR) was developed by USSOCOM to replace the existing, obsolescing APQ-186 TF/TA multimode radar on the CV-22. The acquisition strategy for the CV-22 SF Common TF/TA (Silent Knight) Radar program is to procure radar units and radar software modifications through the USSOCOM SKR Program Management Office. Contracts will be awarded to integrate SKR into the V-22 platform and buy aircraft modification kits, using a mixture of both sole source and competitive contracts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF200 / CV-22
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CV-22 SF Common TF/ TA (Silent Knight) Radar - Operational Flight Program (OFP) Development	TBD	Various : Various	-	-		6.384	Jan 2018	7.910	Nov 2018	-		7.910	Continuing	Continuing	-
CV-22 SF Common TF/ TA (Silent Knight) Radar - Integration	TBD	Various : Various	-	-		6.774	Feb 2018	12.099	Feb 2019	-		12.099	Continuing	Continuing	-
Block 20	Various	Various : Various	1.057	-		-		-		-		-	0.000	1.057	-
Subtotal			1.057	-		13.158		20.009		-		20.009	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CV-22 SF Common TF/ TA (Silent Knight) Radar - OFP	TBD	Various : Various	-	0.651	Nov 2017	0.590	Jan 2018	1.110	Nov 2018	-		1.110	Continuing	Continuing	-
CV-22 SF Common TF/ TA (Silent Knight) Radar - Integration	TBD	Various : Various	-	-		0.511	Feb 2018	1.225	Feb 2019	-		1.225	Continuing	Continuing	-
Block 20	Various	Various : Various	1.936	-		-		-		-		-	0.000	1.936	-
Subtotal			1.936	0.651		1.101		2.335		-		2.335	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
	Project Cost Totals		2.993	0.651	14.259	22.344	-	22.344	Continuing	Continuing

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

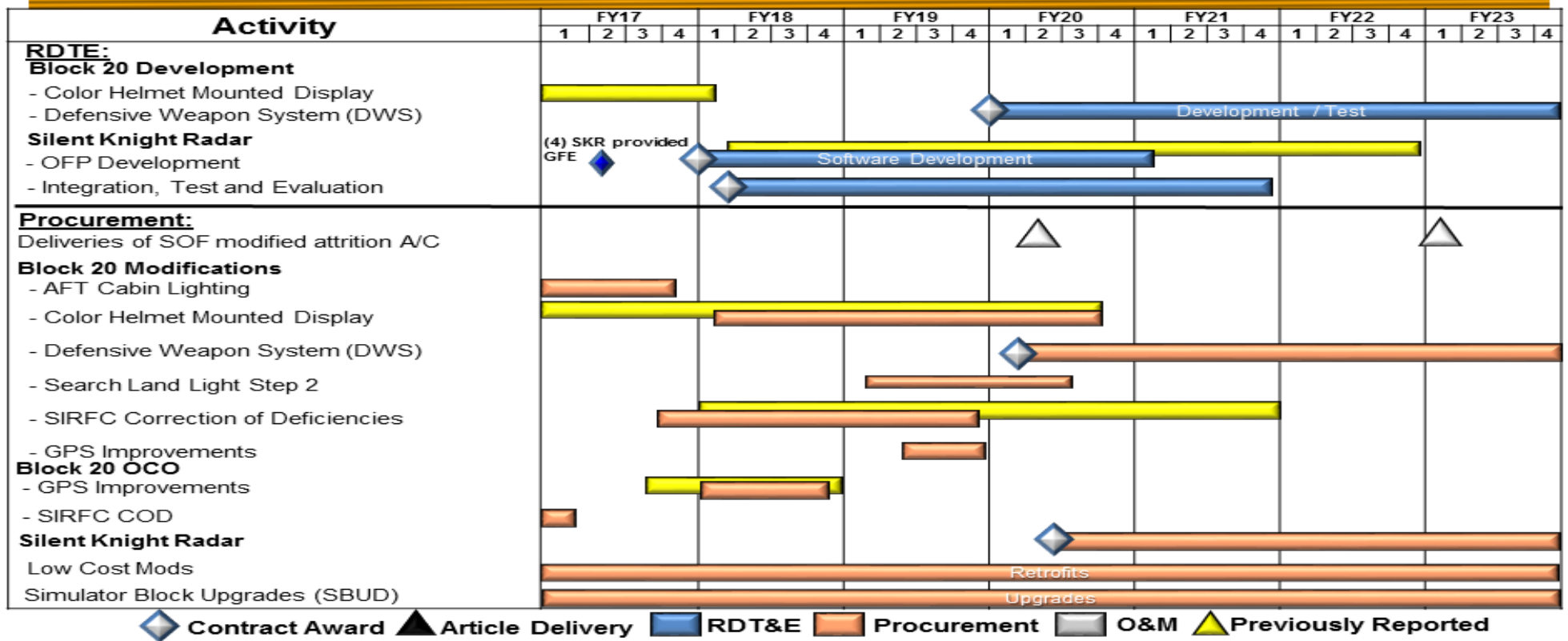
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF200 / CV-22

CV-22 Schedule



UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF200 / CV-22
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CV-22				
Block 20 Development/Test	1	2017	1	2018
Defensive Weapon System (DWS)	1	2020	4	2023
SF Common TF/TA (Silent Knight) Radar - OFP Development	2	2018	4	2021
SF Common TF/TA (Silent Knight) - Radar Integration	2	2018	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S750 / Mission Training and Preparation Systems			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S750: Mission Training and Preparation Systems	19.647	6.745	8.181	7.520	-	7.520	8.635	9.673	9.596	9.788	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds the definition, design, development, prototyping, integration, and testing of Mission Training and Preparation Systems (MTPS) to support training, avoid obsolescence, and maintain simulator concurrency with weapon system configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Force (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse SOF training systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SOMPE	6.745	8.181	7.520	-	7.520
<p>Description: Special Operations Mission Planning and Execution (SOMPE) develops, integrates, tests, and validates software enhancements required to meet SOF-unique requirements for, and correct deficiencies to, mission planning, preview, and execution software tools to support all phases of SOF operations from deliberate to time-critical. The SOMPE project automates time-sensitive planning activities and provides enhanced situational awareness during mission execution. SOMPE provides the interoperable environment for SOF adaptive planning to integrate global operations including, but not limited to, precision strike software, digital navigation, and unmanned aerial systems command and control. This project also provides the integration of SOMPE with multi-dimensional visualization systems, providing immersive mission rehearsal in minimal timeframes from the SOMPE mission plan. SOMPE is embedded in the USSOCOM Headquarters, Theater Special Operations Commands, Joint Special Operations Task Forces, Joint Special Operations Aviation Components, SOF warfighters, and SOF warfighter platforms.</p> <p>FY 2018 Plans: Continue development of software applications to address SOF-unique aviation, ground and maritime mission planning requirements, data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems, and automated performance models and performance prediction software.</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S750 / Mission Training and Preparation Systems

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continue updating of mission planning, data transfer and performance software. Continue development of software applications for smaller mobile computer devices (tablets, smart phones, etc). FY 2019 Base Plans: Continues development of software applications to address SOF-unique aviation, ground and maritime mission planning requirements, data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems, and automated performance models and performance prediction software. Continues updating of mission planning, data transfer and performance software. Continues development of software applications for smaller mobile computer devices (tablets, smart phones, etc). FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.592 million is for minor adjustments.					
Accomplishments/Planned Programs Subtotals	6.745	8.181	7.520	-	7.520

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

SOMPE comprises multiple mission planning software development contracts awarded to developers for each project effort. Acquisition strategies depend on the type of development effort. For minor software development projects, contracts may be awarded as sole source acquisitions from existing contract vehicles. For major software development projects, contracts may be awarded as limited or full and open competition acquisitions. Individual acquisition strategies are developed as the scope of software development projects are identified and defined.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S750 / Mission Training and Preparation Systems
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Special Operations Mission Planning and Execution (SOMPE) Software Development and Integration	MIPR	Various : Various	15.372	5.260	Jan 2017	6.682	Jan 2018	6.073	Jan 2019	-		6.073	Continuing	Continuing	-
Subtotal			15.372	5.260		6.682		6.073		-		6.073	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE Software	MIPR	Special Operations Mission Planning Office : Fort Eustis, VA	1.570	0.371	Feb 2017	0.385	Feb 2018	0.371	Feb 2019	-		0.371	Continuing	Continuing	-
Subtotal			1.570	0.371		0.385		0.371		-		0.371	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE Software	C/CPFF	Wyle-CAS : Huntsville, AL	2.705	1.114	Jan 2017	1.114	Jan 2018	1.076	Jan 2019	-		1.076	Continuing	Continuing	-
Subtotal			2.705	1.114		1.114		1.076		-		1.076	Continuing	Continuing	N/A

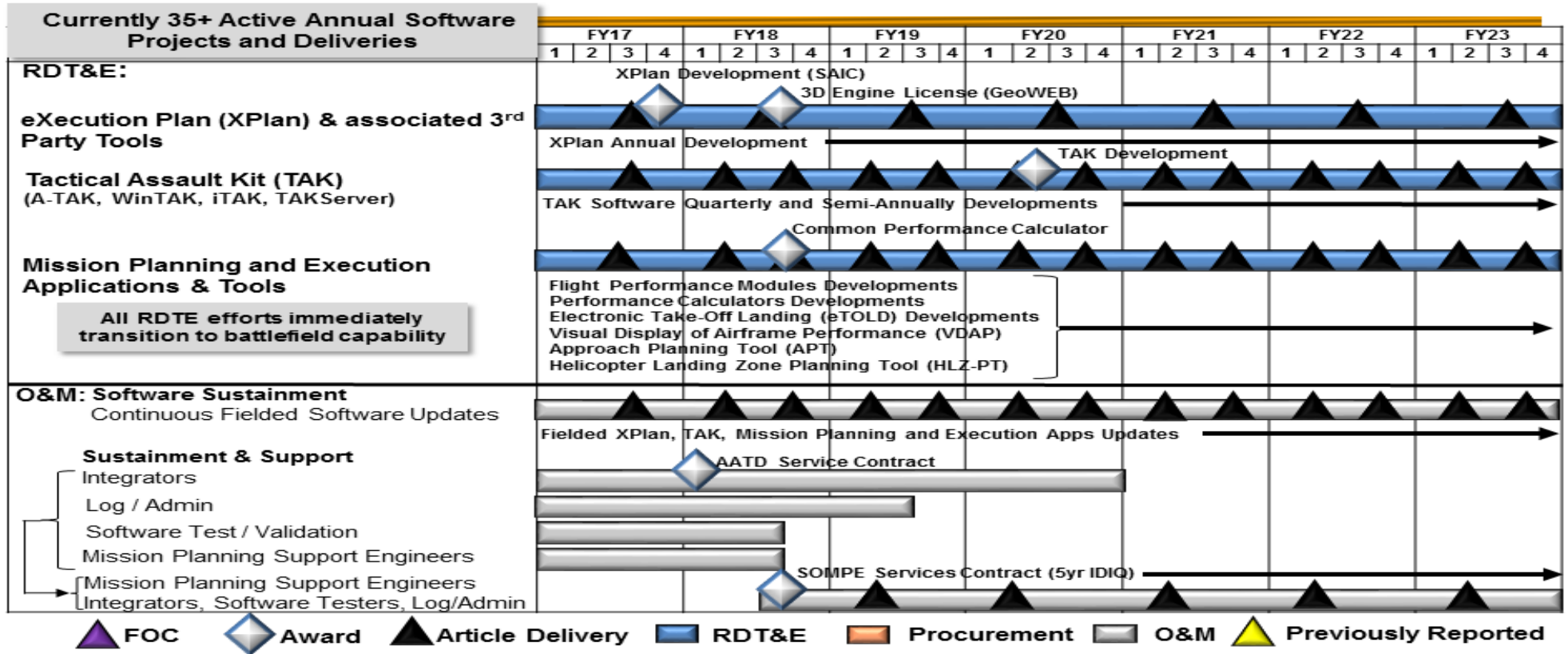
			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			19.647	6.745	8.181	7.520	-	7.520	Continuing	Continuing	N/A

Remarks
*** PLEASE ADD COSTS OR ENTER REMARKS ***

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S750 / Mission Training and Preparation Systems

SOMPE SCHEDULE



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S750 / Mission Training and Preparation Systems

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Special Operations Mission Planning and Execution (SOMPE)</i>				
Product Development	2	2017	4	2023
Support (Software)	2	2017	4	2023
Test and Evaluation (Software)	2	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>				Project (Number/Name) S875 / <i>AC/MC-130J</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S875: <i>AC/MC-130J</i>	29.906	8.020	9.351	17.091	-	17.091	23.900	52.613	54.103	55.122	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The AC/MC-130J project funds core SOF-unique modifications to replace aging/retired AC-130H Spectre, AC-130W Stinger II, AC-130U Spooky, MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the PSP to achieve the AC-130J configuration. The AC-130J aircraft will provide close air support, air interdiction, and armed reconnaissance capability. The 14 MC-130E Talon I, 23 MC-130P Combat Shadow, and 20 MC-130H Talon II airframes will be replaced by MC-130J Commando II aircraft with SOF mission modifications. The MC-130J Commando II aircraft perform clandestine or low visibility, single or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; and airdrop of leaflets, insert small special operations teams, resupply bundles and combat rubber raiding craft. The Air Force procures and fields the basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to integrate SOF capabilities onto the aircraft and training systems. SOF capabilities include, but are not limited to, Airborne Mission Networking, data fusion, threat detection and avoidance, integrated terrain following/terrain avoidance, electronic warfare, and embedded training. Integrating and automating SOF mission systems that deliver these capabilities is critical to fielding SOF-capable AC/MC-130J aircraft to recapitalize Air Force Special Operations Command's legacy C-130 fleet.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: MC-130J Airborne Mission Networking (AbMN)	7.627	8.936	4.324	-	4.324
Description: AbMN provides aircrew and mission personnel aboard MC-130J aircraft with an integrated networked solution to rapidly and effectively send and receive mission-critical data to/from tactical and operational nodes in the battlespace. Capabilities include, but are not limited to, secure Line-of-Sight/Beyond Line-of-Sight voice/data communications, friendly force identification, mission tracking, threat identification, full-motion video, collaboration, chat, e-mail, and data links. AbMN improves SOF ability to streamline command and control, improve situational awareness, and reduce operational risk through real time exchange of digital information among aircraft, SOF components, and other tactical and operational nodes.					
FY 2018 Plans: Completes system design and conduct test in System Integration Lab (SIL) for ground and flight testing.					
FY 2019 Base Plans: Completes trial installation and begins ground and flight testing.					
FY 2018 to FY 2019 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S875 / AC/MC-130J
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Decrease of \$4.612 million is due to completion of system design and SIL testing in FY 2018.					
<p>Title: AC-130J</p> <p>Description: Develops, integrates, and tests aircraft enhancements to meet SOF-unique mission requirements. Enhancements include providing PSP aircraft infrastructure development.</p> <p>FY 2018 Plans: Continue development and tests aircraft modification designs for PSP kit installation.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.415 million is due to completion of development phase.</p>	0.393	0.415	-	-	-
<p>Title: Integrated Tactical Mission Systems (ITMS)</p> <p>Description: ITMS resolves aircrew workload by merging SOF mission systems data with green aircraft flight information and automating displays and controls. Capabilities include, but are not limited to, automated route replanning, tactical flight management, integrated aircraft defensive systems, and defensive countermeasures embedded training. ITMS provides reduced aircrews with real-time information and decision-making data for safe terrain following/terrain avoidance flight (MC-130J aircraft) and seamless employment of the Precision Strike Package (AC-130J aircraft).</p> <p>FY 2019 Base Plans: Begins integration, interoperability risk reduction and test of SOF tactical mission systems, including but not limited to terrain following/terrain avoidance capabilities, situational awareness capabilities, electronic warfare capabilities, and special mission systems (SMS). Begins development of SMS capabilities required to automate tactical mission systems (including, but not limited to, data fusion, threat correlation, machine learning).</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$12.698 million supports development of an integrated special mission system (SMS) capable of automating SOF tactical mission systems.</p>	-	-	12.767	-	12.767
Accomplishments/Planned Programs Subtotals	8.020	9.351	17.091	-	17.091

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/2012C130J: AC/MC-130J	68.333	179.934	165.813	-	165.813	170.323	180.730	221.927	285.871	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) S875 / <i>AC/MC-130J</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/1202PSP: <i>Precision Strike Package</i>	227.882	229.728	226.965	-	226.965	228.510	232.704	148.680	66.870	Continuing	Continuing

Remarks

D. Acquisition Strategy

MC-130J AbMN: Award sole source Cost-Plus-Fixed-Fee contract to develop a battlespace information exchange system for the MC-130J consisting of Government/Commercial-off-the-shelf communications and computing hardware and Government/developmental software. This approach leverages portions of the AC-130J gunship infrastructure design applicable to the MC-130J. After completing developmental and operational flight testing, award a sole source contract for Low Rate Initial Production followed by a competitive Firm-Fixed Price contract for production, aircraft integration, and fielding.

The basic AC-130J aircraft will be acquired under the U.S. Air Force HC/MC-130J Recapitalization procurement program. USSOCOM will fund development, integration, and testing of capability enhancements for SOF-unique mission equipment using an incremental acquisition strategy. Multiple contract awards.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S875 / AC/MC-130J
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MC-130J Airborne Mission Networking (AbMN)	C/CPFF	Sierra Nevada Corporation : Centennial, CO	-	7.486	Jul 2017	7.954	Dec 2017	1.824	Dec 2018	-		1.824	Continuing	Continuing	-
Integrated Tactical Mission System (ITMS) - Tactical Flight Management System Development	C/Various	TBD : TBD	-	-		-		6.667	Jan 2019	-		6.667	Continuing	Continuing	-
Prior Year	C/Various	Various : Various	29.906	-		-		-		-		-	Continuing	Continuing	-
Subtotal			29.906	7.486		7.954		8.491		-		8.491	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ITMS - Support	C/Various	Various : Various	-	-		-		1.200	Dec 2018	-		1.200	Continuing	Continuing	-
Subtotal			-	-		-		1.200		-		1.200	Continuing	Continuing	N/A

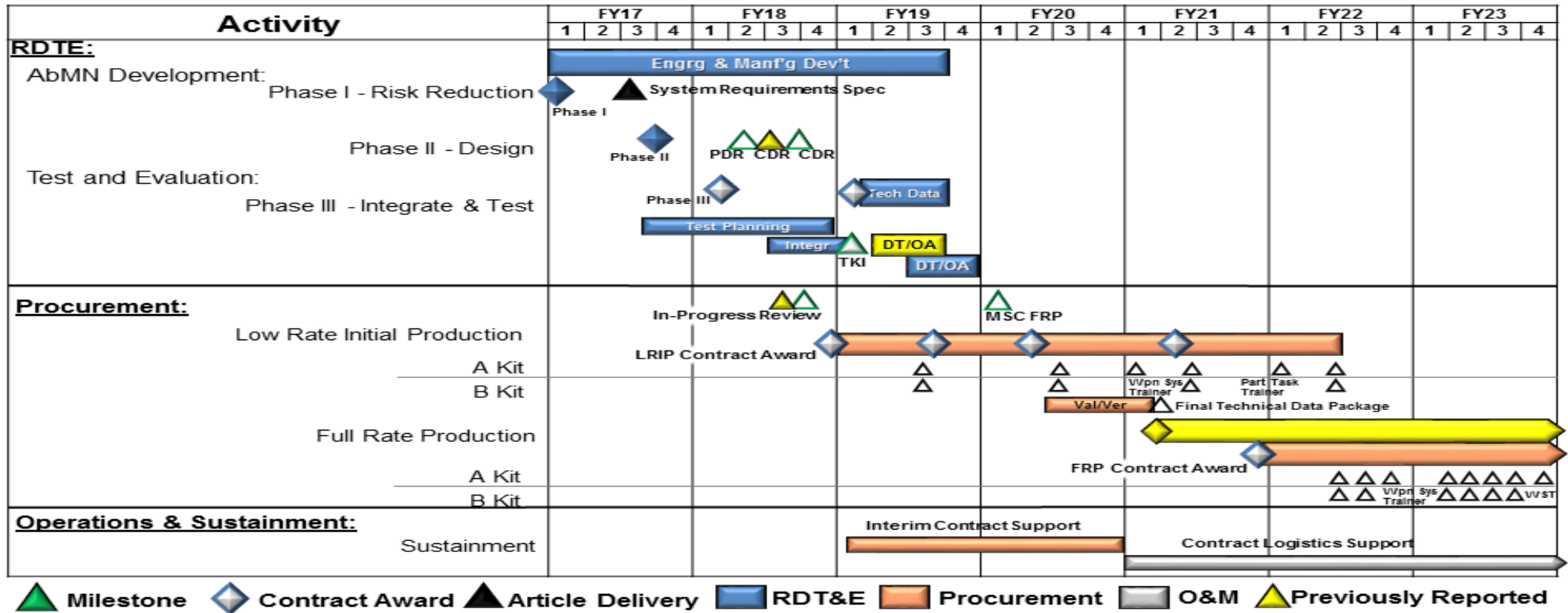
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AC-130J	C/Various	Lockheed Martin : Atlanta, GA	-	0.393	Jan 2017	0.415	Jan 2018	-		-		-	0.000	0.808	-
ITMS - Integration and Test	Allot	USSOCOM Detachment 1 : Eglin AFB, FL	-	-		-		4.900	Jan 2019	-		4.900	Continuing	Continuing	-
MC-130J AbMN Integration and Test	MIPR	USSOCOM Detachment 1 Joint Test Interoperability Command : Eglin AFB, FL	-	0.141	Apr 2017	0.982	Dec 2017	2.500	Dec 2018	-		2.500	Continuing	Continuing	-
Subtotal			-	0.534		1.397		7.400		-		7.400	Continuing	Continuing	N/A

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
S875 / AC/MC-130J

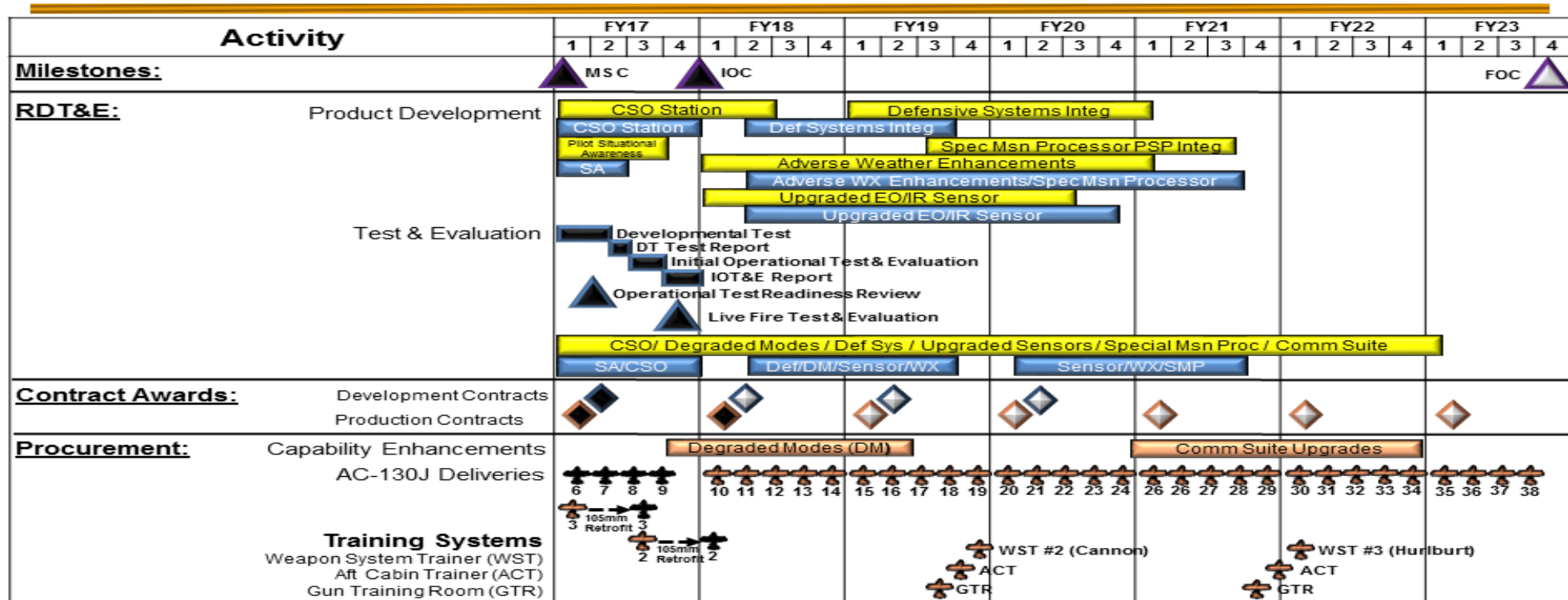
MC-130J AbMN Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S875 / AC/MC-130J

AC-130J/PSP Schedule



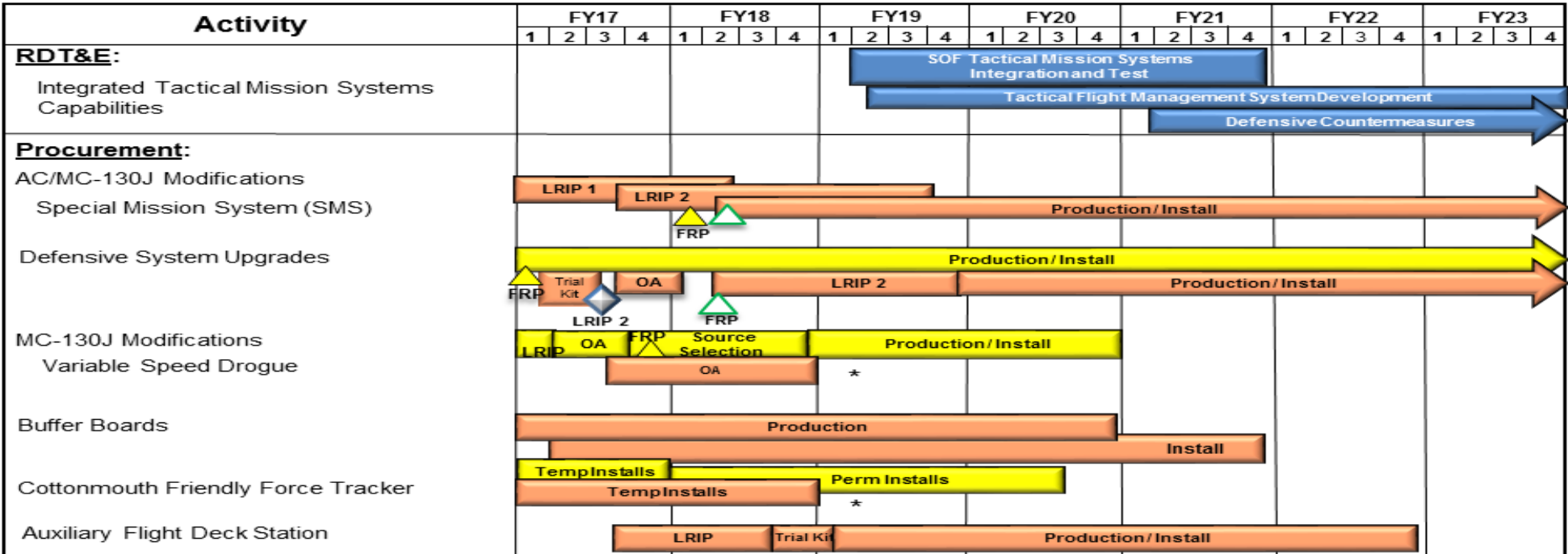
Milestones
 Contract Award
 Article Delivery
 RDT&E
 Procurement
 Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) S875 / AC/MC-130J
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AC/MC-130J Mission Systems and MC-130J Modifications Schedule



* AFSOC Priority: Full Rate Production for VSD and Cottonmouth permanent installs cancelled to accelerate DSU capability to field.

▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) S875 / <i>AC/MC-130J</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>MC-130J Airborne Mission Networking (AbMN)</i>				
Development and Test	4	2017	3	2019
Trial Kit Installation	1	2019	2	2019
<i>Integrated Tactical Mission Systems (ITMS)</i>				
Tactical Flight Management System Development	2	2019	4	2023
Integration and Test	2	2019	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) D615 / Rotary Wing Aviation			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
D615: Rotary Wing Aviation	141.399	40.209	52.552	20.010	-	20.010	25.352	17.695	12.574	12.802	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops/upgrades Special Operation Forces (SOF) rotary wing aircraft systems that operate in increasingly hostile environments. This project includes modifications to Aircraft Survivability Equipment (ASE) and weapons systems to counter rapidly merging threats, improve lethality and enhance aircraft self-protection. Rotary wing aircraft supported by this project include: A/MH-6M, MH-60M, and MH-47G. These aircraft provide aviation support to SOF in world-wide contingency operations and low-intensity conflicts and they must be capable of rapid deployment, undetected penetration of hostile areas, and operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: A/MH-6M Block 3.0 Upgrade	13.420	13.384	3.120	-	3.120
<p>Description: Upgrade is necessary to restore structural, performance, and safety margins for the aircrews. An airframe structural modification and/or airframe replacement will address recurring structural failures due to high intensity, high gross weight operations, and a decade of battle damage. A main/tail rotor drive train and engine control improvement efforts will reduce airframe loads and restore sufficient safety and performance margins. An avionics upgrade will replace obsolescent components to the extent possible and provide improved battlefield situational awareness to the aircrews and customers necessary to support time sensitive mission requirements. This upgrade is critical in keeping the A/MH-6M aircraft operational beyond FY 2020 and until a suitable replacement aircraft is available. The non-recurring effort supports development, fabrication of test hardware, qualification of components and systems, and data items to support issuance of Government airworthiness releases for structural and software modifications.</p> <p>FY 2018 Plans: Continue software qualification, Airworthiness and Flight Characteristics (A&FC) testing efforts.</p> <p>FY 2019 Base Plans: Completes software qualification and A&FC testing efforts.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
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Decrease of \$10.264 million is due to completion of software and airframe qualification efforts and the government A&FC.					
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Title: MH-60M Modifications and Upgrades	0.952	3.479	2.182	-	2.182
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Description: Develops technologies to improve safety of the MH-60 and decrease operational costs. Efforts include, but are not limited to, DoD MH-60 engineering changes, product improvements to SOF-unique equipment and munitions during testing. This sub-project also includes modifications to ASE and weapons systems to counter rapidly emerging threats, improve lethality and enhance aircraft self-protection. The MH-60M Block Upgrades provide the development, integration, and qualification efforts on the MH-60 helicopter to include flight test support, engineering analysis, documentation, and airworthiness substantiation.

FY 2018 Plans:
Continue integration and testing of technologies to improve safety and decrease operational costs to include aircraft survivability equipment, weapons systems improvement and munitions during testing. Start NRE efforts in support of Upturned Exhaust System (UES) II qualification.

FY 2019 Base Plans:
Continues integration and testing of UES II and other technologies to improve safety and decrease operational costs to include aircraft survivability equipment, weapons systems improvement and munitions during testing.

FY 2018 to FY 2019 Increase/Decrease Statement:
Decrease of \$1.297 million was adjusted to account for the availability of prior year execution balances.

Title: Degraded Visual Environment (DVE)	9.117	-	1.672	-	1.672
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Description: Solution will fuse information from aircraft sensors to display real-time reference points, obstacles, and landing zone information to the aircrew. The DVE solution will provide MH-47/60 aircrews with visual cues for obstacle avoidance and aircraft control during all phases of flight and significantly increase crew and passenger survivability in DVE. This program addresses SOF-unique requirements for rapid fielding and weight limitations, and capitalizes integration of SOF-unique avionics with the unique skills of the SOF aviator.

FY 2019 Base Plans:
Completes aircraft integration and testing of the DVE two sensor solution on SOF MH-47 and MH-60.

FY 2018 to FY 2019 Increase/Decrease Statement:

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
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Increase of \$1.672 million completes the aircraft integration and testing associated with the design change from a three sensor solution to a two sensor solution.					
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Title: Future Vertical Lift (FVL)	0.514	1.123	0.800	-	0.800
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Description: Provides for the long-term replacement of an aging fleet of aircraft and provides a significant increase in range, speed, payload, survivability, reliability, and maintainability of vertical lift aircraft to meet emerging mission requirements. USSOCOM will participate in the service-common development of a joint future vertical lift aircraft by injecting USSOCOM requirements and equities into the initial development and design efforts to minimize SOF-unique modifications to the common aircraft.

FY 2018 Plans:
Continue to participate in providing guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft.

FY 2019 Base Plans:
Continues to participate in providing guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft.

FY 2018 to FY 2019 Increase/Decrease Statement:
Decrease of \$0.323 million is due to adjustments for Departmental economic assumption (\$0.093 million) and a decrease to account for prior year execution balances (\$0.230 million).

Title: Infrared Countermeasures (IRCM)	3.442	2.277	2.461	-	2.461
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Description: Provides a low Size, Weight, and Power (SWaP) IRCM capability suitable for the A/MH-6 Mission Enhanced Little Bird with potential use on the MH-60 and MH-47 aircraft. The IRCM program will leverage the Department of Navy developed Distributed Aperture Infrared Countermeasure System by integrating and testing a complete lightweight IRCM systems to include a missile warning system and countermeasure capability. The IRCM program includes development of an infrared exhaust suppressor for the A/MH-6. The A/MH-6 is the only tactical aircraft in the SOF inventory without protection from infrared guided and other advanced Man Portable Air Defense missiles.

FY 2018 Plans:
Continue qualification testing of missile warning and lightweight IRCM systems for the A/MH-6 aircraft.

FY 2019 Base Plans:

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continues qualification testing of missile warning and lightweight IRCM systems for the A/MH-6 aircraft. FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.184 million partially funds aircraft testing, addressing SOF-unique hardware and software improvements.					
Title: MH-47 Modifications and Upgrades Description: Develops technologies to improve performance and safety of the MH-47G and decrease operational costs. Efforts include, but are not limited to, the Active Parallel Actuator System (APAS) and Engine Barrier Filter. This sub-project also includes modifications to ASE and weapons systems to counter rapidly emerging threats and enhance aircraft self-protection. FY 2018 Plans: Continue APAS development, including integration with MH-47G subsystems. FY 2019 Base Plans: Continues APAS development, including integration with MH-47G subsystems. FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$5.416 million is due to lower level of APAS development, including integration with MH-47G subsystems (\$1.882 million), a decrease of \$0.093 million due to a Departmental economic assumption adjustment and a decrease of \$3.441 million is to account for the availability of prior year execution balances.	11.191	10.721	5.305	-	5.305
Title: Mission Processor Upgrades (MPU) Description: Provides for non-recurring engineering (NRE), systems engineering/testing, and future aircraft architecture studies that support the replacement and upgrade of the current mission and video processors for all Army Special Operations Aviation (ARSOA) rotary wing aircraft. Upgrading all internal processors increases the processing power to support critical functionality and emerging technologies that will be integrated into the Common Avionics Architecture System. This MPU provides the processing and memory resources required to incorporate the following functions into the General Purpose Processing Unit: (1) Global Air Traffic Management replaces ground-based navigation aids with a capability that meets the international requirement that all aircraft be compliant with digital and space-based navigation systems; (2) Cognitive Decision Aiding System fuses information on threat, route, weather, terrain, and friendly forces instantaneously adjusting an aircraft's route to protect the flight crew in hazardous weather, low levels, and night conditions. FY 2018 Plans:	-	5.087	0.362	-	0.362

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Begin exploration of the next generation ARSOA cockpit, to include mission video processor development and testing.</p> <p>FY 2019 Base Plans: Continues exploration of the next generation ARSOA cockpit, to include mission video processor development and testing.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$4.494 is due to lower level of exploration of the next generation ARSOA cockpit.</p>					
<p>Title: Aircraft Survivability Equipment (ASE) Upgrades</p> <p>Description: Develops, integrates, and tests critical active and passive SOF-unique aircraft survivability equipment to counter the acknowledged high proliferation of advanced Surface-to-Air threat systems for the A/ MH-6, MH-60, and MH-47. Additionally, these threat systems are technically evolving at an unprecedented rate, requiring rapid counter measure system development and immediate spiraled improvements that will reduce the probability of successful engagement, increase the probability of detecting and countering threat systems, and improve the aircraft's ability to continue operating after sustained battle damage. This program includes development and testing of both new systems and pre-planned product improvements (P3I)/upgrades of fielded survivability equipment, flares, and associated qualification testing. P3I upgrades may include, but are not limited to, expansion of frequency ranges on existing systems, modernization of legacy components, and studies directed at potential "collaborative off-boarding/on-boarding" detect/countermeasure capabilities to provide expanded coverage for aircrews in a high threat environment.</p> <p>FY 2018 Plans: Begin development of new systems, P3I/upgrades of fielded survivability equipment, and continue development of flare countermeasures.</p> <p>FY 2019 Base Plans: Continues development of new systems, P3I/upgrades of fielded survivability equipment, and continues development of flare countermeasures.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$11.781 million is due to completing the development effort associated with Block I Radio Frequency Countermeasures in FY 2018 (\$9.162 million) and a decrease of \$2.619 million to account for the availability of prior year execution balances.</p>	1.573	15.889	4.108	-	4.108
<p>Title: Secure Real Time Video</p>	-	0.592	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Description: Ensures that SOF aircrews and operators have access to the latest data collected on the objective enabling them to maintain situational awareness enroute and improve survivability. This project will integrate and test software and hardware improvements to provide SOF helicopters with access to rapidly evolving, real-time Full Motion Video (FMV) intelligence.</p> <p>FY 2018 Plans: Conduct evaluations of candidate FMV Transceivers having reduced size, weight, and power (SWaP).</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.592 million is due to higher command priorities.</p>					
Accomplishments/Planned Programs Subtotals	40.209	52.552	20.010	-	20.010

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/0201RWUPGR: Rotary Wing Upgrades and Sustainment	164.596	158.988	148.351	-	148.351	143.788	149.300	152.009	155.215	Continuing	Continuing
• 0201MH60: MH-60 Blackhawk	18.600	-	0.000	27.600	27.600	-	-	-	-	953.413	953.413
• 0601MH47: MH-47 Chinook	29.022	97.615	167.533	-	167.533	174.617	175.266	178.771	182.346	Continuing	Continuing

Remarks

D. Acquisition Strategy

- A/MH-6M Block 3.0 Upgrade comprises of two distinct efforts: airframe and avionics upgrades. Additionally within the airframe upgrade, there are two sub efforts (new rotor blades/flight control kits and new integrated airframe shells). The airframe efforts (new rotor blades/flight control kits and new shells) will be a sole-source contract to Boeing, owner of the technical data associated with the A/MH-6 airframes. The cockpit avionics architecture will be developed by Rockwell-Collins. Any new hardware components will be Non Developmental Item/Commercial-Off-The-Shelf to the extent possible and will be competitively selected. Airframe modification and integration work will be conducted at the Special Operations Forces Support Activity (SOFSA) by the incumbent contractor.
- MH-60M Modifications and Upgrades supports systems integration and qualification efforts on the prototype MH-60M helicopter. This includes, but is not limited to, government and contractor flight test support, engineering analysis, documentation, and airworthiness substantiation. Airframe modification and integration work will be conducted at SOFSA by the incumbent contractor.
- MH-60M Block Upgrades are accomplished for 72 MH-60M base aircraft with various contractors and acquisition vehicles. The SOFSA executes SOF-unique upgrade modifications onto the MH-60M base aircraft.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>
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- DVE integrates and qualifies a solution to address a safety of flight issue while flying in DVE. A competitive source selection process was conducted for the DVE solution which will procure, integrate, and install components to provide real-time “see through” imagery and visual cues for obstacle avoidance and landing zone information during all phases of flight.
- FVL is the SOF aviation participation in the Joint FVL effort to develop the next generation of vertical takeoff and landing aircraft and establishes the foundation for the transformation of DOD vertical lift aviation capabilities over the next forty years.
- IRCM integrates a mission configurable Missile Warning System and IRCM capability at a weight suitable for the A/MH-6 aircraft. Procurement of systems for integration and test will leverage Department of Navy IRCM development efforts and contracts. The Government will integrate the systems onto the A/MH-6 utilizing existing aircraft modification contracts.
- MH-47 Modifications and Upgrades will develop technologies to improve performance and safety of the MH-47G and decrease operational costs. Efforts include the APAS and Engine Barrier Filter. The upgrades and modifications mostly consist of Government executed integration, testing, and qualification efforts with some analytical engineering services to be completed.
- MPU - Provides for future cockpit architecture studies that will help define the replacement of current mission and video processors for all ARSOA platforms. Additionally it will address near term required upgrades to existing components. Potential upgrades will be through existing OEMs, while the future cockpit architecture studies will be competitively awarded.
- The ASE Upgrades program develops and tests both new systems and pre-planned product improvements/upgrades of fielded survivability equipment and flares. For new systems, other services’ development and testing contracts are leveraged to the maximum extent possible. Upgrades of fielded equipment are typically accomplished by the OEM.
- The SRTV project integrates and tests software and hardware improvements to provide SOF helicopters with access to rapidly evolving, real-time FMV intelligence. A variety of contracting methods will be used for acquiring test assets, accomplishing SOF-unique modifications and testing to include use of other services’ contracts, competition, sole source awards, and directed efforts of government organizations.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Degraded Visual Environment (DVE)	C/Variou	PM TAPO : Fort Eustis, VA	37.301	9.117	Sep 2017	-		1.672	Apr 2019	-		1.672	0.000	48.090	-
MH-47 Modifications and Upgrades	C/Variou	PM TAPO : Fort Eustis, VA	17.826	11.191	Oct 2016	10.721	Nov 2017	5.305	Nov 2018	-		5.305	Continuing	Continuing	-
Aircraft Survivability Equipment (ASE) Upgrades	C/Variou	PM TAPO : Fort Eustis, VA	-	1.573	Nov 2017	15.889	Mar 2018	4.108	Mar 2019	-		4.108	Continuing	Continuing	-
Secure Real Time Video	C/Variou	PM TAPO : Fort Eustis, VA	-	-		0.592	Feb 2018	-		-		-	Continuing	Continuing	-
Prior Years Funding	C/Variou	PM MELB : Fort Eustis, VA	59.820	-		-		-		-		-	Continuing	Continuing	-
Subtotal			114.947	21.881		27.202		11.085		-		11.085	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Future Vertical Lift	C/Variou	PEO-RW : MacDill AFB, FL	1.605	0.514	Feb 2017	1.123	Feb 2018	0.800	Feb 2019	-		0.800	Continuing	Continuing	-
Subtotal			1.605	0.514		1.123		0.800		-		0.800	Continuing	Continuing	N/A

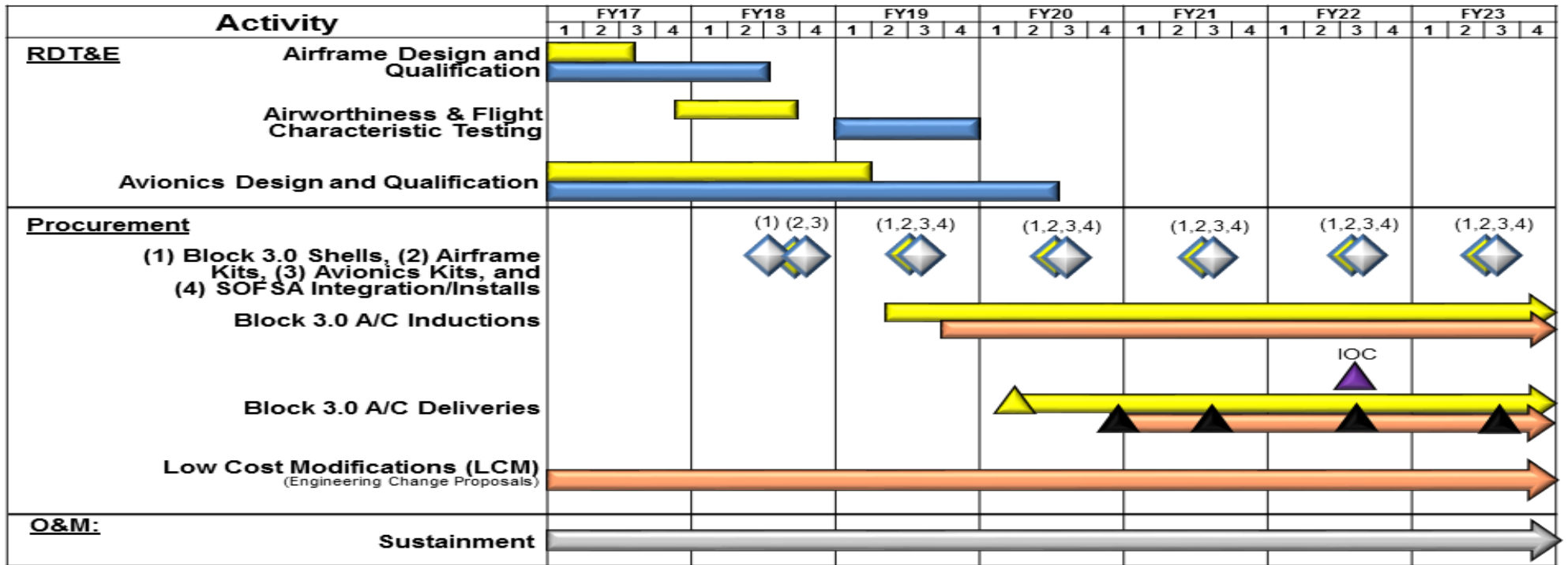
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
A/MH-6M Block 3.0 Upgrades	C/Variou	PM MELB : Fort Eustis, VA	-	13.420	Dec 2016	13.384	Nov 2017	3.120	Nov 2018	-		3.120	Continuing	Continuing	-
MH-60M Modification and Upgrades	C/Variou	Various : Various	-	0.952	Mar 2017	3.479	Apr 2018	2.182	Apr 2019	-		2.182	Continuing	Continuing	-
IRCM Integration and Testing	C/Variou	PM TAPO : Fort Eustis, VA	-	3.442	Jun 2017	2.277	Feb 2018	2.461	Feb 2019	-		2.461	Continuing	Continuing	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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A/MH-6 Program Schedule

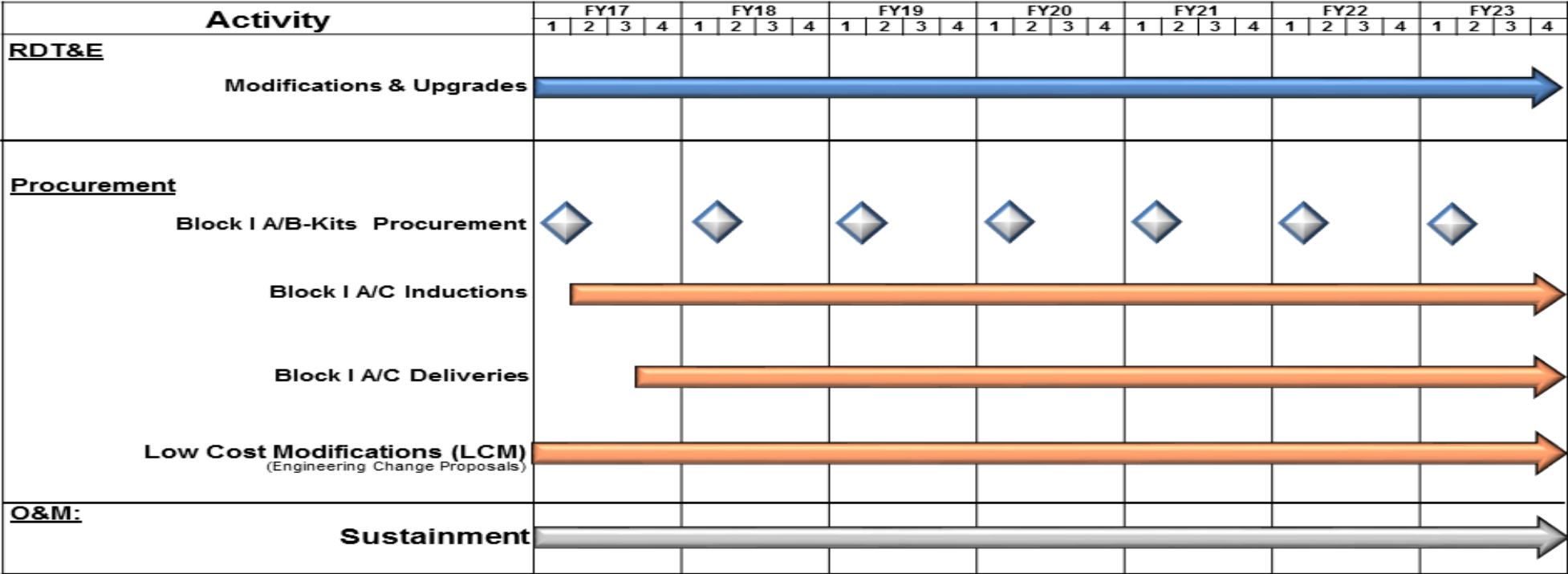


▲ IOC
 ◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation

MH-60M Program Schedule



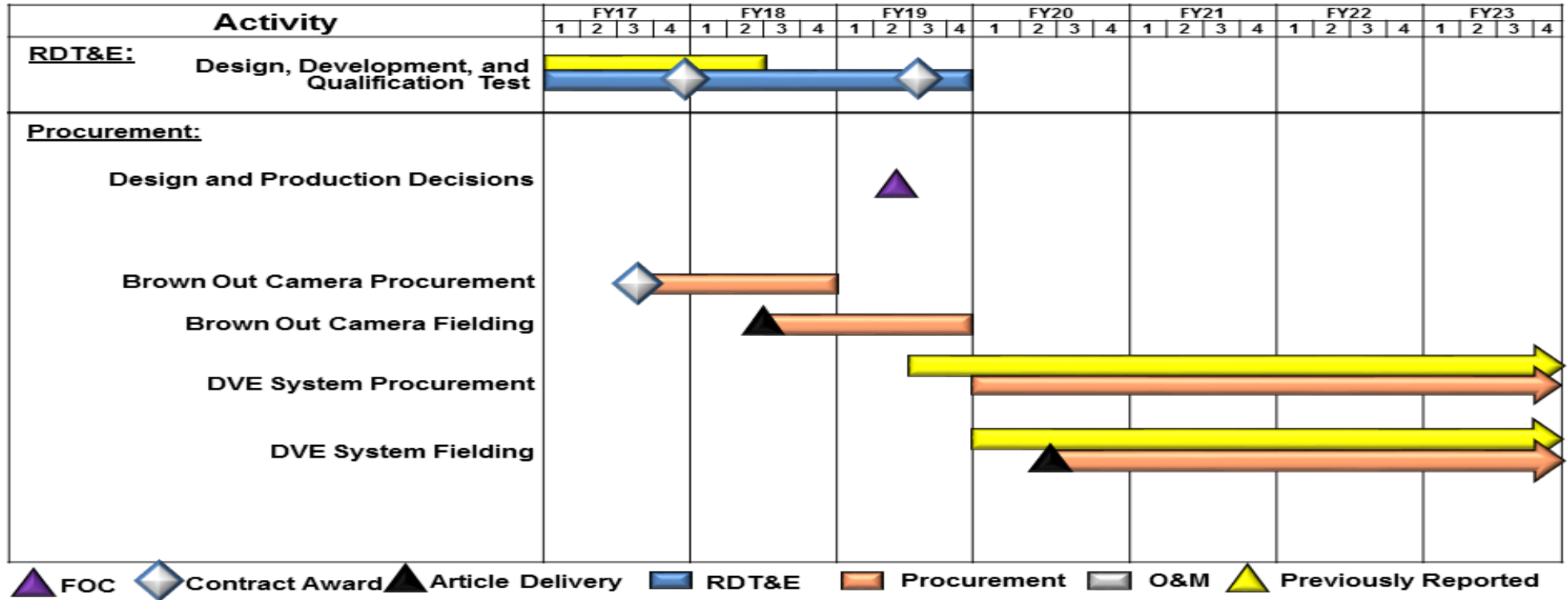
FOC
 Contract Award
 Article Delivery
 RDT&E
 Procurement
 O&M
 Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Degraded Visual Environment Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Future Vertical Lift Schedule

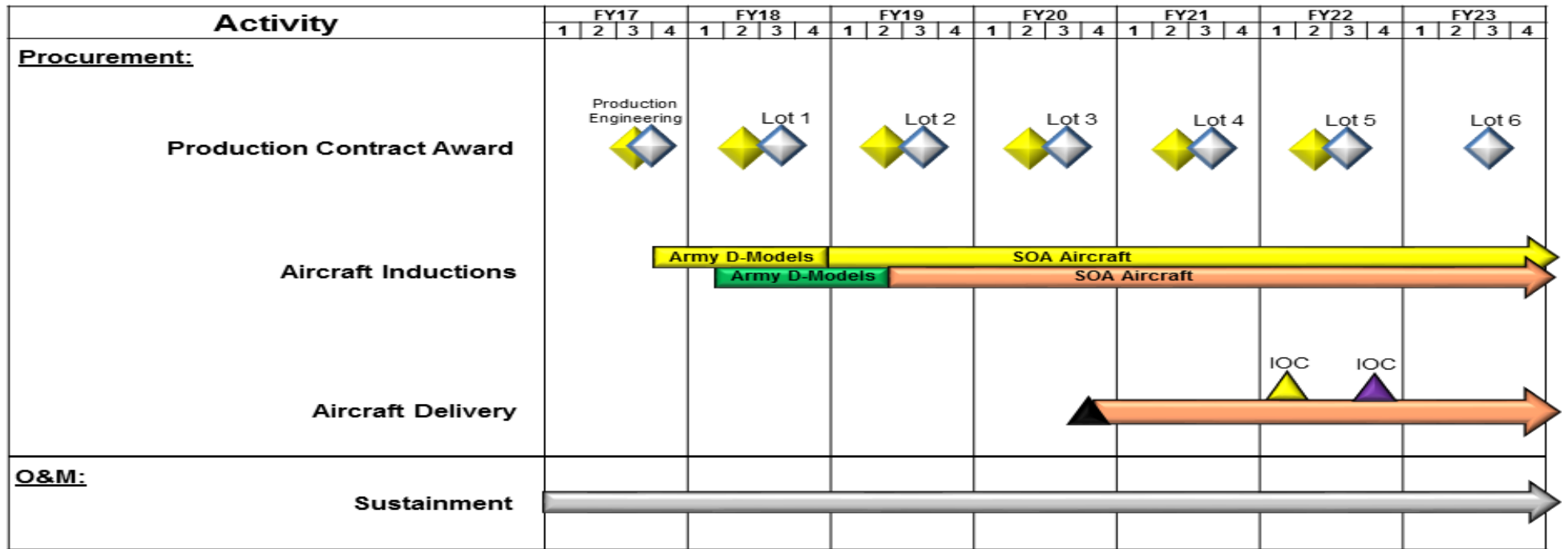
Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
<u>RDT&E</u>																																
SOF-P Analysis of Alternatives & Requirements Development																																

▲ FOC
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 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation

MH-47 Chinook Renew Schedule



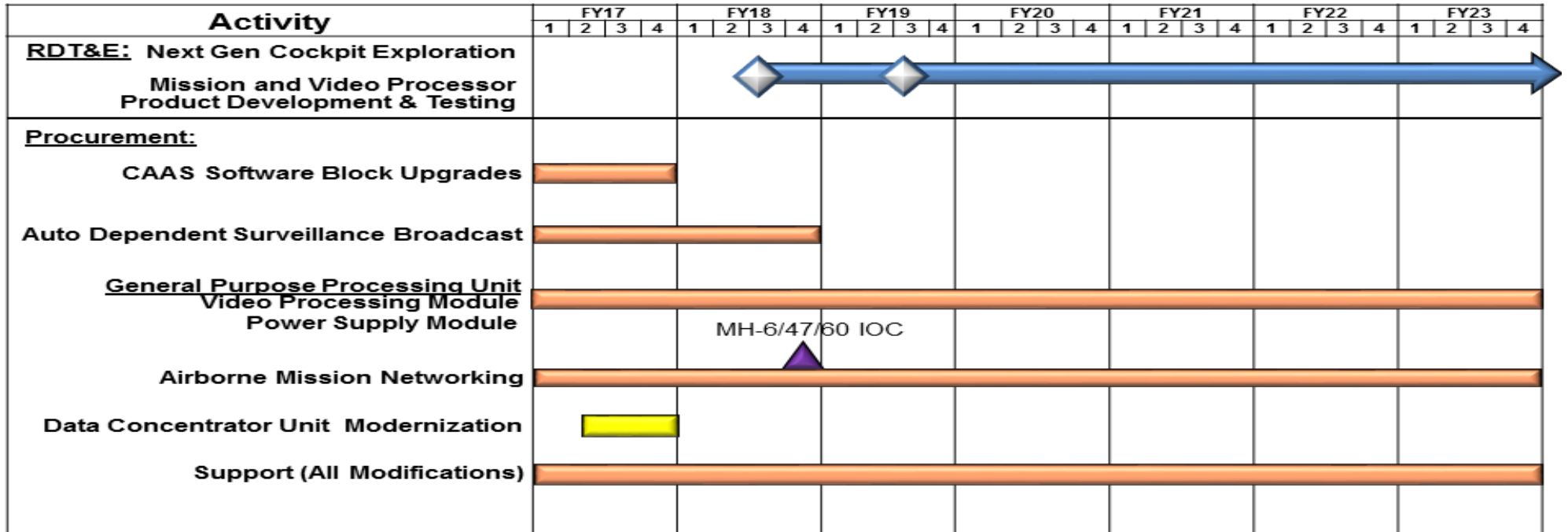
▲ FOC
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 ▲ Article Delivery
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 ▬ Procurement
 ▬ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Mission Processor Upgrades Schedule



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 ◆ Article Award
 ▲ Article Delivery
 ▬ RDT&E
 ▬ Procurement
 ▬ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

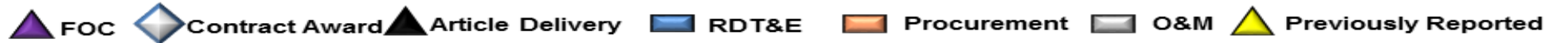
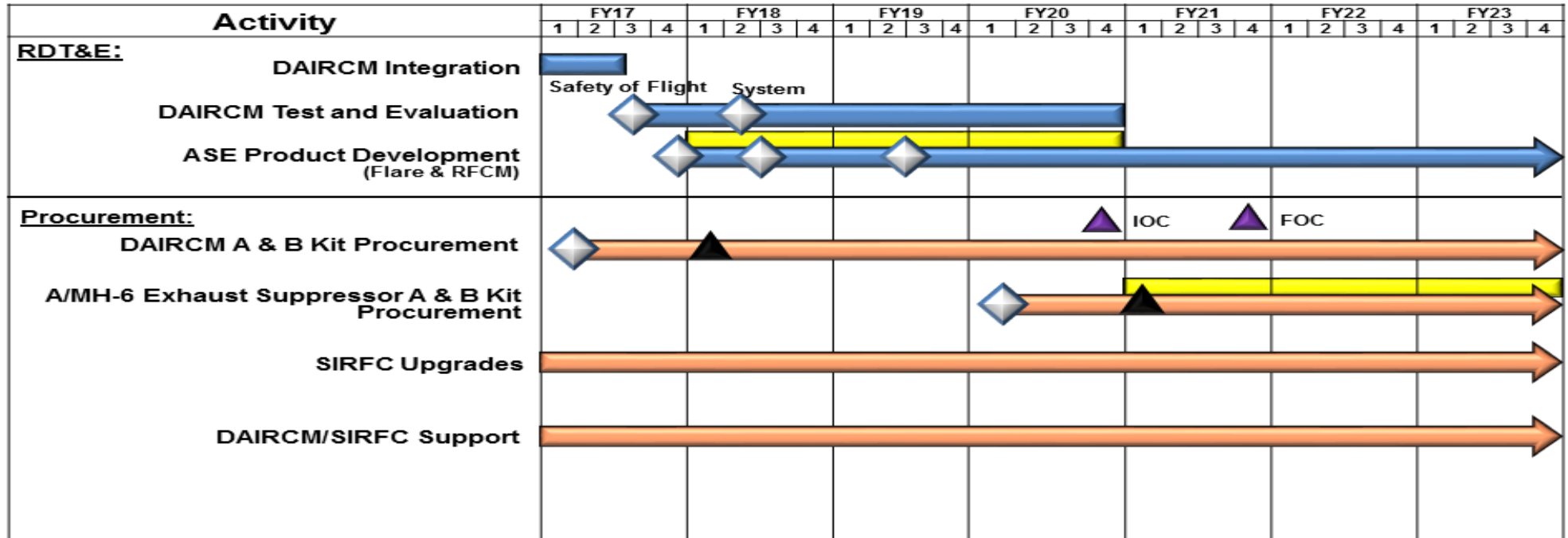
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
D615 / Rotary Wing Aviation

Aircraft Survivability Equipment Schedule

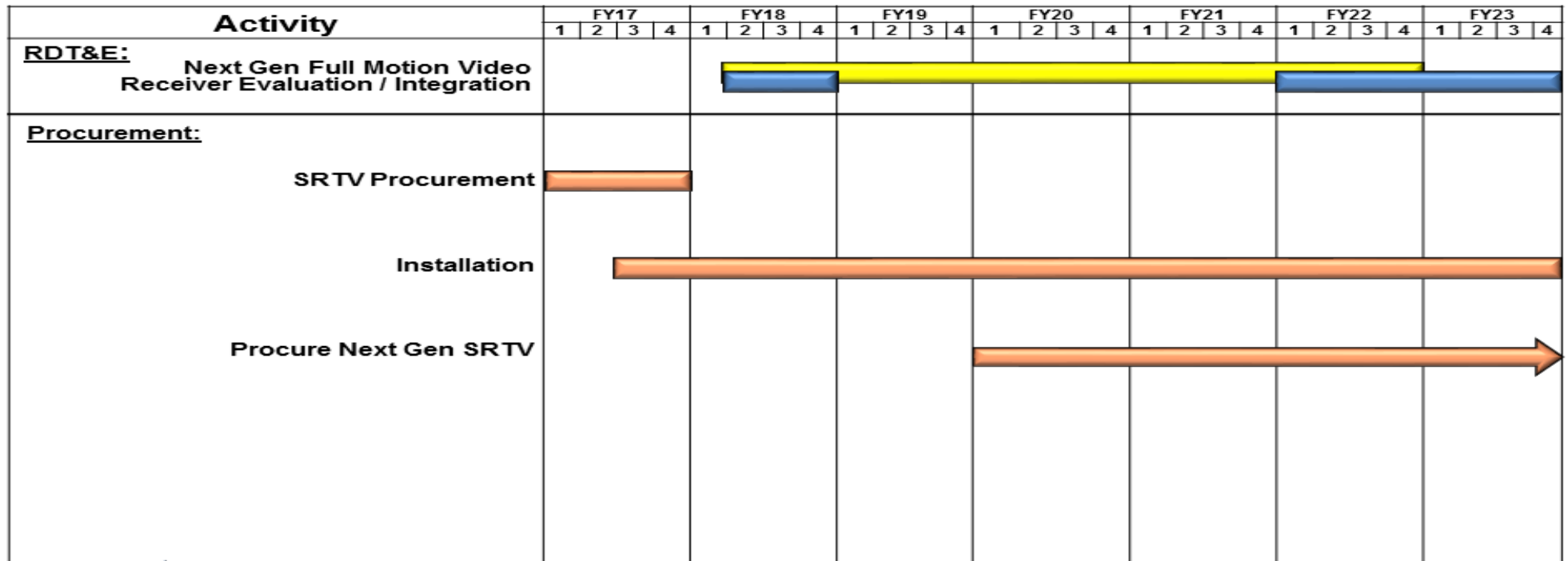


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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Secure Real Time Video Schedule



▲ FOC
 ◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>A/MH-6M Block 3.0</i>				
Airframe Design and Qualification	1	2017	3	2018
Airworthiness and Flight Characteristics	3	2018	4	2019
Avionics Design, Test, and Qualification	1	2017	4	2020
<i>MH-60M Modifications and Block Upgrades</i>				
Modifications and Upgrades	1	2017	4	2023
Integration and Flight Test Qualification	1	2017	4	2017
<i>Degraded Visual Environment</i>				
Design, Development, and Qualification	4	2017	4	2021
<i>Future Vertical Lift</i>				
SOF-P Analysis of Alternatives/Requirements Development	1	2017	4	2023
<i>MH-47 Block Upgrades</i>				
Development of Modifications and Upgrades	1	2017	4	2023
<i>Mission Processor Upgrades</i>				
Mission and Video Processor Development and Testing	3	2018	4	2023
<i>Aircraft Survivability Equipment</i>				
IRCM Integration	1	2017	3	2017
IRCM Test and Evaluation	1	2017	4	2020
ASE Product Development	1	2017	4	2023
<i>Secure Real Time Video</i>				
Development of Next Generation SRTV	2	2018	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	570.242	5.803	8.245	10.625	-	10.625	9.094	9.030	8.898	9.070	Continuing	Continuing
S400: <i>SO Intelligence Systems</i>	570.242	5.803	8.245	10.625	-	10.625	9.094	9.030	8.898	9.070	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP) that provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, biometric/forensic site exploitation and tactical exploitation of national system capabilities. USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	9.858	8.245	8.113	-	8.113
Current President's Budget	5.803	8.245	10.625	-	10.625
Total Adjustments	-4.055	0.000	2.512	-	2.512
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-3.900	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.155	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	2.512	-	2.512

Change Summary Explanation

Funding:

FY 2017: Decrease of -\$4.055 million is due to Congressional directed reductions to the Joint Threat Warning System (-\$2.000 million), the National System Support to SOF (-\$1.900 million) programs and a reprogramming of \$0.155 million to higher command priorities.

FY 2018: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160405BB / <i>Intelligence Systems Development</i>

FY 2019: Net Increase of \$2.512 million due to an increase of \$0.250 million for the Maritime Combat Development of Special Reconnaissance Equipment, a decrease of \$0.778 million to account for the availability of prior year execution balances, a decrease of \$0.060 million to reflect Departmental economic assumption decrease and an increase of \$3.100 million for Special Operations Forces Planning, Rehearsal and Execution Preparation efforts.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>				Project (Number/Name) S400 / <i>SO Intelligence Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S400: <i>SO Intelligence Systems</i>	570.242	5.803	8.245	10.625	-	10.625	9.094	9.030	8.898	9.070	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This sub-project is part of the Military Intelligence Program (MIP). Provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. The systems developed and tested in this line item are National Systems Support to SOF (NSSS); Joint Threat Warning System (JTWS); Hostile Forces - Tagging, Tracking, and Locating (HF-TTL); Special Operations Tactical Video System/Reconnaissance, Surveillance, and Target Acquisition (TVS/RSTA); Special Operations Forces Planning, Rehearsal and Execution Preparation (SOFPREP); Integrated Survey Program (ISP); and Sensitive Site Exploitation (SSE).

U.S. Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities throughout the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments. The intelligence programs funded in this project will meet annual emergent requirements and are grouped by the level of organizational element they support: Operational Element (Team) and Above Operational Element (Garrison).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: NSSS	0.816	0.832	0.849	-	0.849
Description: This program provides research and development and rapid prototyping as the HQ SOCOM Tactical Exploitation of National Capabilities (TENCAP) program. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands (TSOC) by leveraging National Geospatial-Intelligence (NGA) and Service development efforts to provide innovative space-based intelligence systems technologies and enhancements, products and special communications capabilities to tactical SOF units to include Geospatial Intelligence (GEOINT), Signals Intelligence (SIGINT), Special Communications, and intelligence fusion, reporting, and dissemination. NSSS efforts are characterized by rapid development, fielding and deployment, and focus on transitioning to SOCOM Programs of Records (POR). These developmental efforts usually support SOCOM's existing Military Intelligence Programs. NSSS will also improve SIGINT capabilities by pursuing Joint Interface Control Document 4.x and follow-on compliant SIGINT capabilities, extending SOCOM's cross-domain security infrastructure by adding unclassified sensors into theater net-centric					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>geo-location architecture, improve detection of Low-Probability of Intercept/Low Probability of Detection signals, and automate radar characterizations that enhance tactical SOF capabilities to find, fix, monitor, and target assets using NTM.</p> <p>FY 2018 Plans: Continue development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the Intelligence Community (IC), while coordinating with SOCOM and IC Programs of Record for production and operational fielding of the successful capabilities. Emphasize areas to include ISR support for Tagging, Tracking, and higher-accuracy geo-locating of hostile and friendly forces, especially in low sensor density environments.</p> <p>FY 2019 Base Plans: Continues development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the Intelligence Community (IC), while coordinating with SOCOM and IC Programs of Record for production and operational fielding of the successful capabilities. Emphasizes areas to include ISR support for Tagging, Tracking, and higher-accuracy geo-locating of hostile and friendly forces, especially in low sensor density environments.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.017 million due project funding adjustments.</p>					
<p>Title: JTWS</p> <p>Description: The JTWS System of Systems (SoS) enables the SOF Cryptologic Operator to collect, process, locate and exploit threat communications signals of interest in order to provide timely, relevant, and responsive intelligence, cross-cueing, and threat avoidance information directly to the SOF Commanders. The JTWS SoS is assembled in four variants: Ground SIGINT Kit; Maritime; Air; and UAS. Each variant has additional requirements for Communications Intelligence, Electronic Intelligence, and Precision Geo-location.</p> <p>FY 2018 Plans: Continue evaluating interoperability of technologies on JTWS variants as well as continue testing of the various system of systems. Continue technical evaluation of evolving technologies for all variants in order to provide additional capabilities to address emerging threats. Begin modular/scalable open architecture D&T.</p> <p>FY 2019 Base Plans:</p>	3.093	5.335	4.532	-	4.532

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Continues evaluating interoperability of technologies on JTWS variants as well as continue testing of the various system of systems. Continues technical evaluation of evolving technologies for all variants in order to provide additional capabilities to address emerging threats. Continues modular/scalable open architecture D&T.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.803 million is a realignment to higher command priorities.</p>					
<p>Title: HF-TTL</p> <p>Description: This program utilizes a commodity procurement strategy to provide SOF warfighters with the necessary tools to find, fix, and finish terrorist networks through the emplacement of sophisticated tags and devices that feed into an integrated architecture. HF-TTL provides Global Combatant Commanders (GCC) and SOF operators with an immediate capability to tag, track, and locate people, things, and activities. The HF-TTL program provides actionable intelligence for SOF planners. The mission sets comprise a mix of different classes of tags and their associated detection, interrogation, viewing, tracking, and communications systems that are fielded annually to SOF Components and TSOC based upon dynamic and emergent SOF operational requirements.</p> <p>FY 2018 Plans: Continue specialized device modifications, product development support, integration and operational testing and evaluation.</p> <p>FY 2019 Base Plans: Continues specialized device modifications, product development support, integration and operational testing and evaluation.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.102 million due to minor adjustments.</p>	0.801	0.811	0.709	-	0.709
<p>Title: TVS/RSTA</p> <p>Description: This program provides SOF with critical Special Reconnaissance (SR) equipment that directly supports the planning and execution of SOF missions. This capability allows the SOF warfighter to meet SOF SR mission requirements to find, fix, finish, exploit, analyze, and disseminate information of an adversary's movement, construct, identification, location; and associated activities. TVS/RSTA provides GCC and SOF operators with an immediate capability to visually and electronically acquire people, things, and activities and provides actionable intelligence for SOF planners and Commanders. The program Family of Systems (FoS)</p>	0.370	0.393	0.564	-	0.564

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>consists of interoperable equipment to capture and transfer near-real-time ground-based, tactical day/night/reduced visibility, imagery, video, and electronic proximity and movement sensing, all capable of dissemination through SOF organic, global C4I, and commercial communications infrastructures.</p> <p>FY 2018 Plans: Continue specialized device modifications, integration and operational testing and evaluation.</p> <p>FY 2019 Base Plans: Continues specialized device modifications, integration and operational testing and evaluation.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Net increase of \$0.171 million due to re-phasing of effort into FY 2019 for prior year under-execution (\$0.022) and \$0.149 million in support of the Maritime Combat Development of Special Reconnaissance Equipment.</p>					
<p>Title: SOFPREP</p> <p>Description: This program serves as the intelligence focal point for production of SOF enhanced GEOINT (maps, imagery, and terrain data) and 3D scene visualization databases. SOFPREP gathers, processes, exploits, disseminates, and manages classified high resolution 3D databases and GEOINT data in support of SOF training, mission rehearsal, and execution preparation systems. The program builds the SOF common geospatial environment and manages the authoritative database of SOF-specific GEOINT terrain data. SOFPREP is a NGA-certified co-producer in support of time-sensitive SOF specific requirements.</p> <p>FY 2018 Plans: Continue testing and evaluation of operational prototype systems to speed production of correlated high resolution 3D geospatial databases.</p> <p>FY 2019 Base Plans: Continues testing and evaluation of operational prototype systems to speed production of correlated high resolution 3D geospatial databases.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Net Increase of \$3.085 million due to a decrease of \$0.015 million due to realignments for higher command priorities and an increase of \$3.100 million for Prototype emerging technologies to advance the applications of cutting edge computer vision, image processing, and quantum computing.</p>	0.439	0.291	3.376	-	3.376
<p>Title: ISP</p>	0.127	0.402	0.409	-	0.409

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Description: This program collects and produces current, detailed, tactical planning data to support military operations to counter threats against U.S. citizens, interests, and property located both domestically and overseas. ISP products are specifically tailored packages that provide operational information, as well as intelligence data for use by DOD and the U.S. Department of State to support operational planners for counter-terrorism operations, evacuations, and other rescue missions.</p> <p>FY 2018 Plans: Continue development of ISP system and products to integrate with enterprise architecture and support the latest standards and technology.</p> <p>FY 2019 Base Plans: Continues development of ISP system and products to integrate with enterprise architecture and support the latest standards and technology.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.007 million is due to miscellaneous increases in testing efforts.</p>					
<p>Title: SSE</p> <p>Description: This program provides the capability to exploit personnel, documents, electronic data, material, and forensic evidence on sensitive sites/objectives. Biometric kits allow collection and transmission of unique, measurable biometric signatures from personnel, including live/latent fingerprints, iris patterns, and facial features. It also provides a means to verify against and enroll subjects into the DOD authoritative database, and to query that database to support hold or release decisions. Forensic kits enable on-objective linking of events to specific persons through chemical analysis, latent fingerprints, cell phones and computer data analysis, and deoxyribonucleic acid collection. Exploitation Analysis Centers provide theater-level mobile forensic capabilities for more in-depth exploitation of captured evidence.</p> <p>FY 2018 Plans: Continue technical evaluation of new technologies.</p> <p>FY 2019 Base Plans: Continues technical evaluation of new technologies.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>	0.157	0.181	0.186	-	0.186

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Increase of \$0.005 million is due to adjustments in testing requirements.					
Accomplishments/Planned Programs Subtotals	5.803	8.245	10.625	-	10.625

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/020400INTL: <i>Intelligence Systems</i>	104.080	94.538	85.699	16.500	102.199	99.067	105.269	115.679	121.879	Continuing	Continuing

Remarks

D. Acquisition Strategy

- NSSS introduces and integrates national systems capabilities into the SOF force structure and operations. This is accomplished by partnering with existing IC POR to incorporate SOF mission requirements into current and developing technologies and assets. This leveraging of funds increases national and commercial systems awareness, demonstrates the tactical utility of national systems and commercial data, tests technologies and evaluates operational concepts in biennial Joint Staff Special Projects, and allows for the transition of promising concepts and technologies to other SOF program offices for execution.
- JTWS is a SoS leveraging commercial technologies and partnerships with other government agencies. The POR will identify Commercial Off The Shelf (COTS)/Government Off The Shelf capabilities requiring minimal modifications and only use new development when necessary. JTWS will address the continuously evolving threat environments on the Ground, Air, Maritime, and Unmanned Aircraft System variants, leverage existing partnerships with the National Security Agency and other government partners to integrate and sustain systems based on prioritized need from the Components and as emerging threats require technology modernizations. Additionally, the POR will work to find common solutions across the variants and increase interoperability in order to reduce duplication of efforts. The contracting strategy is a mixture of full and open competition for prime integrators and leveraging existing Indefinite Delivery/Indefinite Quantity (IDIQ) contracts for COTS procurement.
- HF-TTL utilizes a commodity procurement acquisition strategy to provide highly sophisticated TTL and close target audio/video devices capable of operating in various environments as needed to meet SOF operational requirements. Commercial and government agency sources will be leveraged for required certifications, device level modifications, integration, functional, and operational testing and evaluations.
- TVS/RSTA employs an evolutionary strategy to incorporate the latest state of technology within its product line to provide upgraded next-generation technology insertion of COTS systems and address the changing threat environment to meet SOF reconnaissance and surveillance mission requirements. Commercial and government agency sources will be leveraged for required certifications, system level integration, functional, and operational testing and evaluations.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>
<ul style="list-style-type: none">• SOFPREP employs an evolutionary strategy to insert emerging technologies for processing, exploitation and dissemination capabilities tailored to SOF user-defined mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.• ISP employs an evolutionary strategy to insert emerging technologies for collection, processing, exploitation and dissemination capabilities tailored to SOF user-defined mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.• SSE uses a commodity procurement acquisition strategy to provide next-generation technologies for collection, processing, exploitation and dissemination capabilities supporting SOF exploitation mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.		
<u>E. Performance Metrics</u> N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
National Systems Support to SOF (NSSS)	MIPR	Various : Various	15.947	0.816	Feb 2017	0.832	Feb 2018	0.849	Feb 2019	-		0.849	Continuing	Continuing	-
Joint Threat Warning System (JTWS)-Air Increment 2	MIPR	SPAWAR : Charleston, SC	7.103	0.702	Feb 2017	0.428	Feb 2018	0.500	Feb 2019	-		0.500	Continuing	Continuing	-
JTWS-Ground Sigint Kit (GSK), Inc 2	C/CPFF	Various : Various	20.643	0.290	Feb 2017	0.932	Apr 2018	0.500	Apr 2019	-		0.500	Continuing	Continuing	-
JTWS-Maritime	C/CPFF	Various : Various	8.261	1.079	Apr 2017	0.871	Apr 2018	0.479	Apr 2019	-		0.479	Continuing	Continuing	-
JTWS-All Variants	MIPR	Various : Various	2.291	0.413	Apr 2017	0.000	Feb 2018	0.393	Apr 2019	-		0.393	Continuing	Continuing	-
Integrated Survey Program	C/FFP	Various : Various	0.403	0.127	Jan 2017	0.402	Jan 2018	0.409	Jan 2019	-		0.409	Continuing	Continuing	-
Hostile Forces-Tagging Tracking, and Locating (HF-TTL)	C/CPFF	Various : Various	1.215	0.516	Feb 2017	0.597	Feb 2018	0.489	Feb 2019	-		0.489	Continuing	Continuing	-
Special Operations Forces Planning, Rehearsal & Execution Preparation (SOPREP)	C/Various	Various : Various	-	-		-		1.868	Feb 2019	-		1.868	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	461.047	-		-		-		-		-	Continuing	Continuing	-
Subtotal			516.910	3.943		4.062		5.487		-		5.487	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTWS Modular/Scalable D&T	C/CPFF	TBD : TBD	-	-		3.104	Apr 2018	2.360	Apr 2019	-		2.360	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	8.296	-		-		-		-		-	Continuing	Continuing	-
Subtotal			8.296	-		3.104		2.360		-		2.360	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JTWS	MIPR	JITC : FT Huachuca, AZ	6.985	0.609	Jan 2017	-		0.300	Jan 2019	-		0.300	Continuing	Continuing	-
Tactical Video System/ Reconnaissance, Surveillance, & Target Acquisition	MIPR	ATEC : FT Huachuca, AZ	0.945	0.370	Jan 2017	0.393	Jan 2018	0.564	Jan 2019	-		0.564	Continuing	Continuing	-
HF-TTL	MIPR	ATEC : FT Huachuca, AZ	-	0.285	May 2017	0.214	May 2018	0.220	May 2019	-		0.220	Continuing	Continuing	-
Sensitive Site Exploitation	MIPR	JITC : FT Huachuca, AZ	-	0.157	Dec 2016	0.181	Dec 2017	0.186	Dec 2018	-		0.186	Continuing	Continuing	-
Special Operations Forces Planning, Rehearsal & Execution Preparation	C/FFP	Various : Various	0.125	0.439	Jan 2017	0.291	Jan 2018	1.508	Jan 2019	-		1.508	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	0.549	-		-		-		-		-	Continuing	Continuing	-
Subtotal			8.604	1.860		1.079		2.778		-		2.778	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
NSSS Program Support	C/CPAF	Jacobs : Tampa, FL	5.753	-		-		-		-		-	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	30.679	-		-		-		-		-	Continuing	Continuing	-
Subtotal			36.432	-		-		-		-		-	Continuing	Continuing	N/A

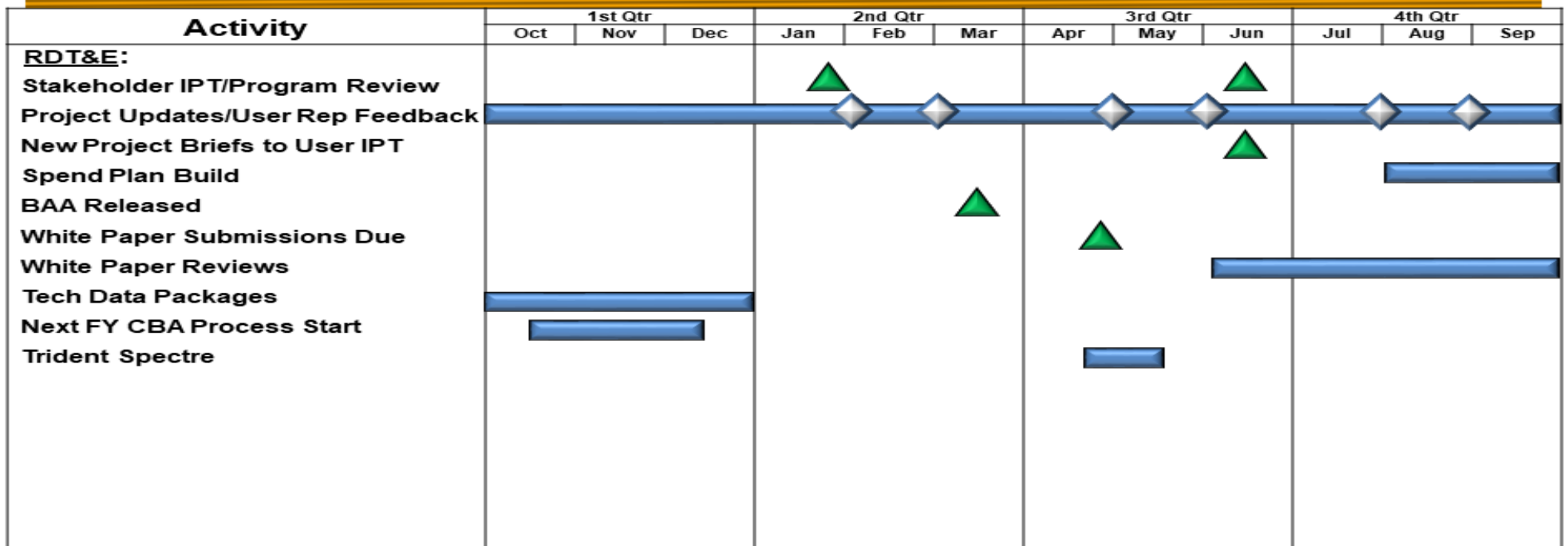
Project Cost Totals	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
	570.242	5.803	8.245	10.625	-	10.625	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

NSSS/TENCAP Program Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

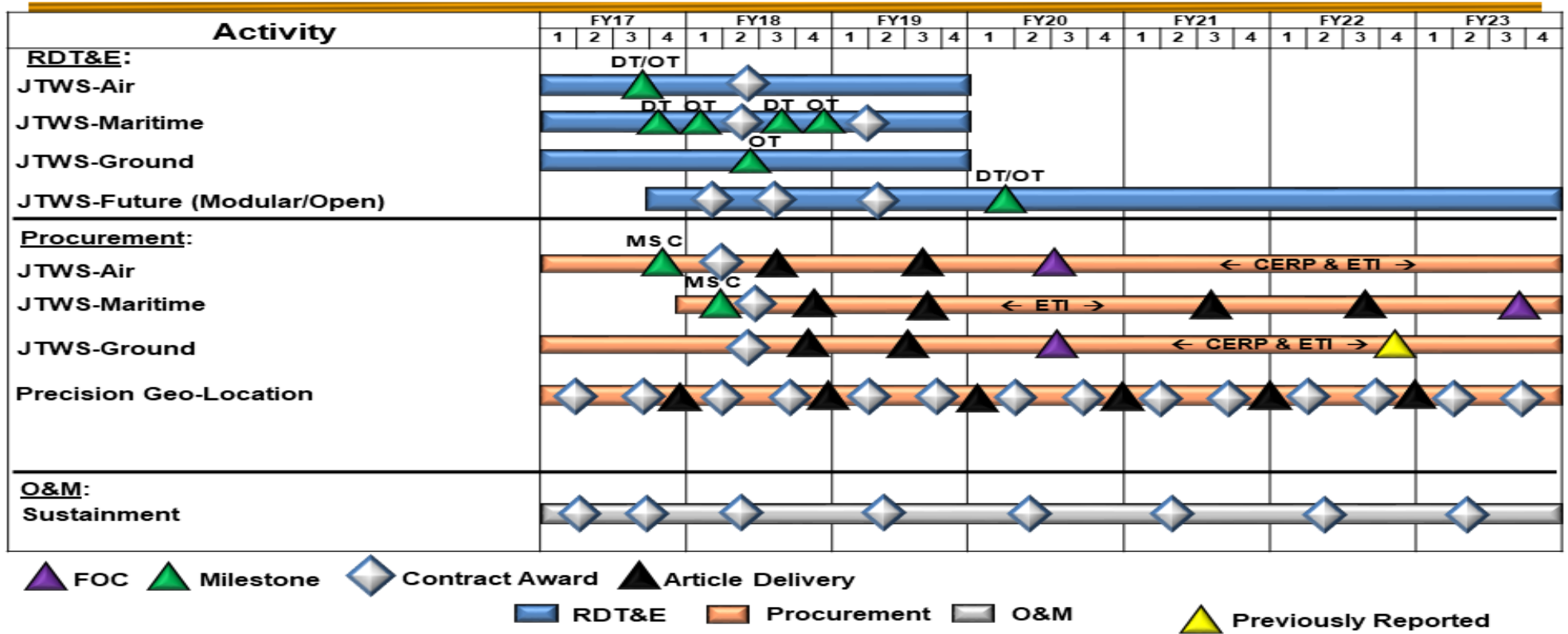
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160405BB / Intelligence Systems
Development

Project (Number/Name)
S400 / SO Intelligence Systems

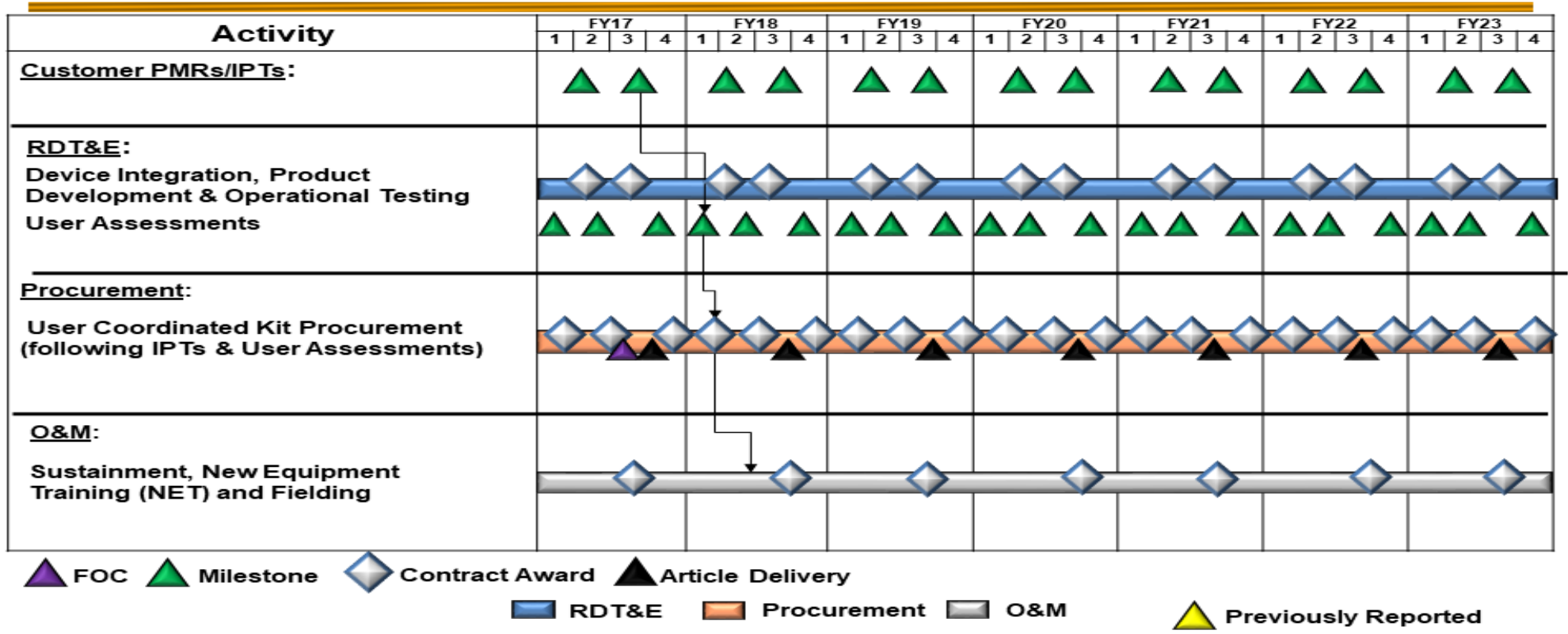
JTWS Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

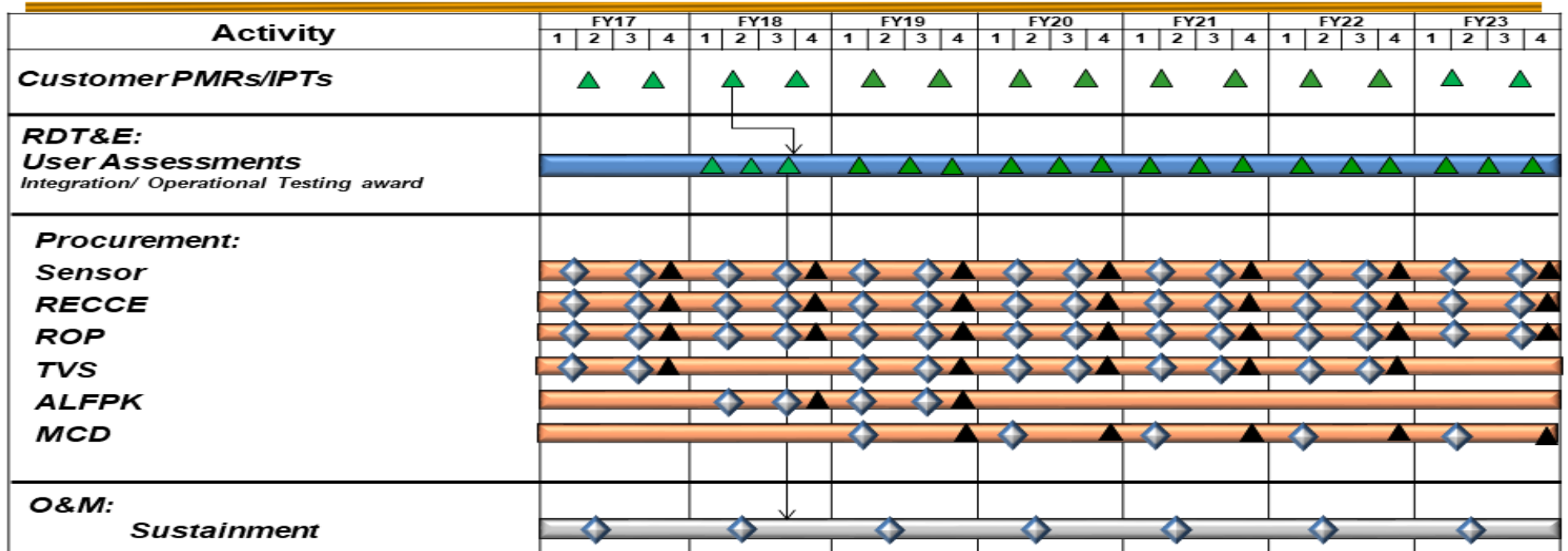
HF-TTL Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

TVS/RSTA Schedule

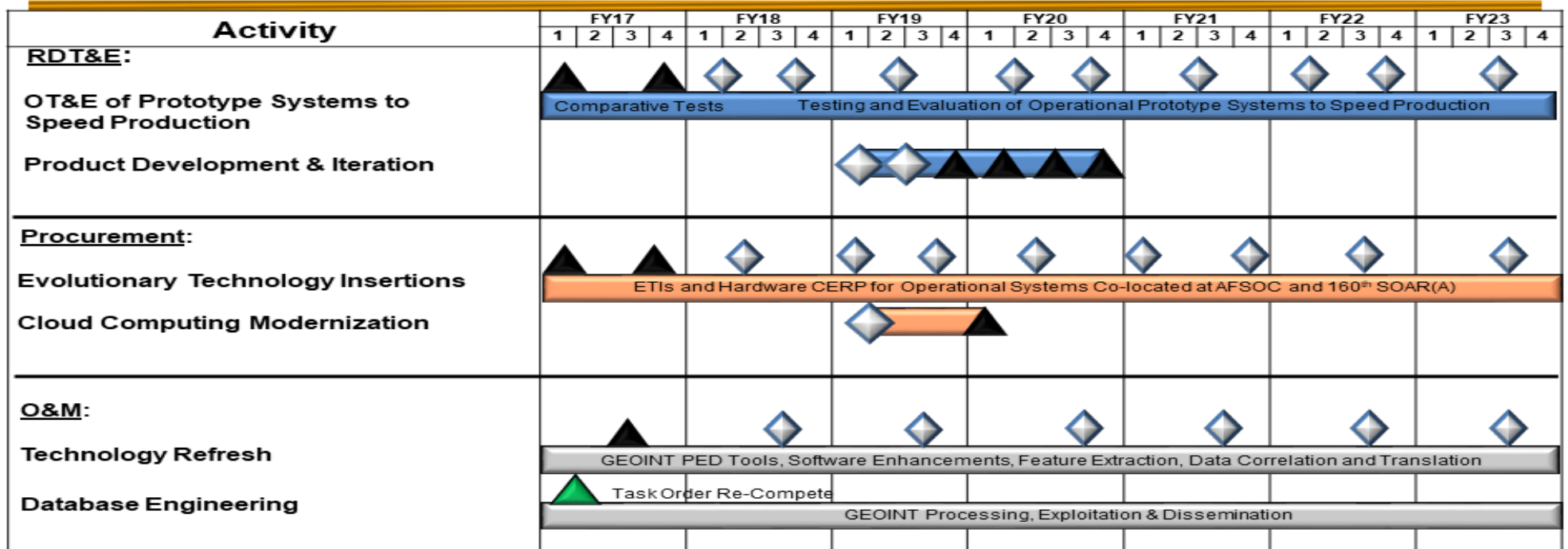


▲ FOC
 ▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

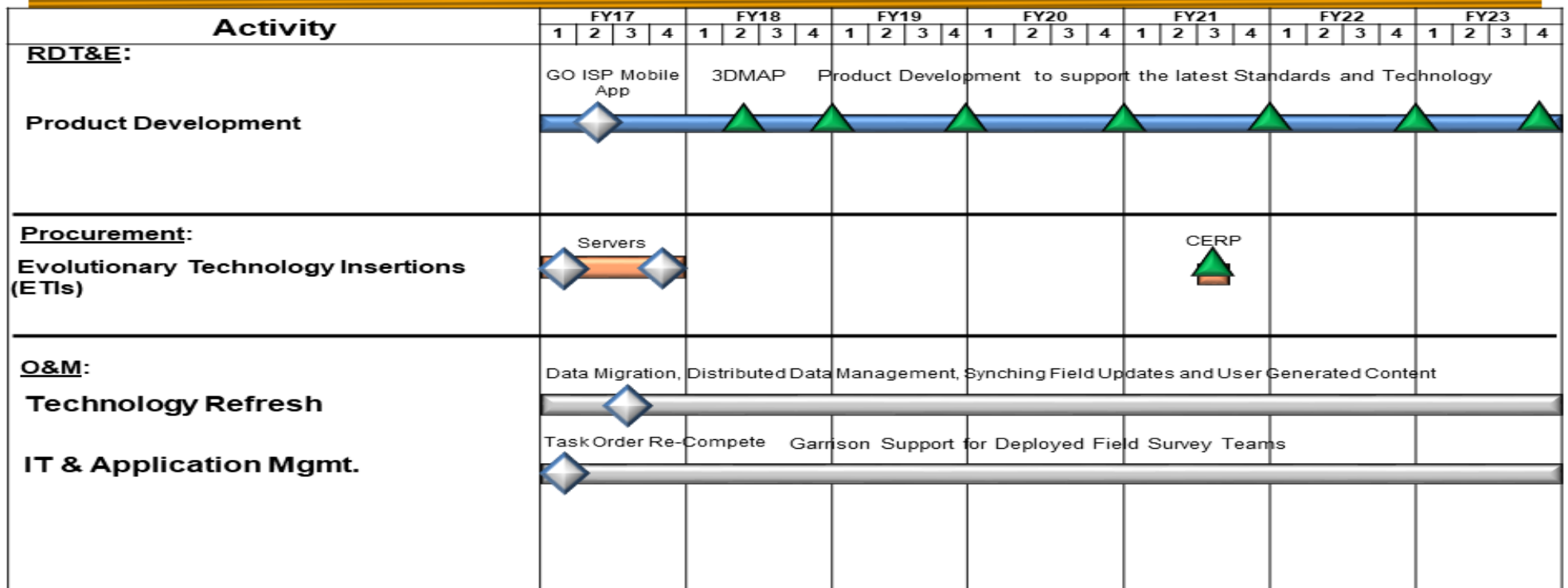
SOFPREP Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

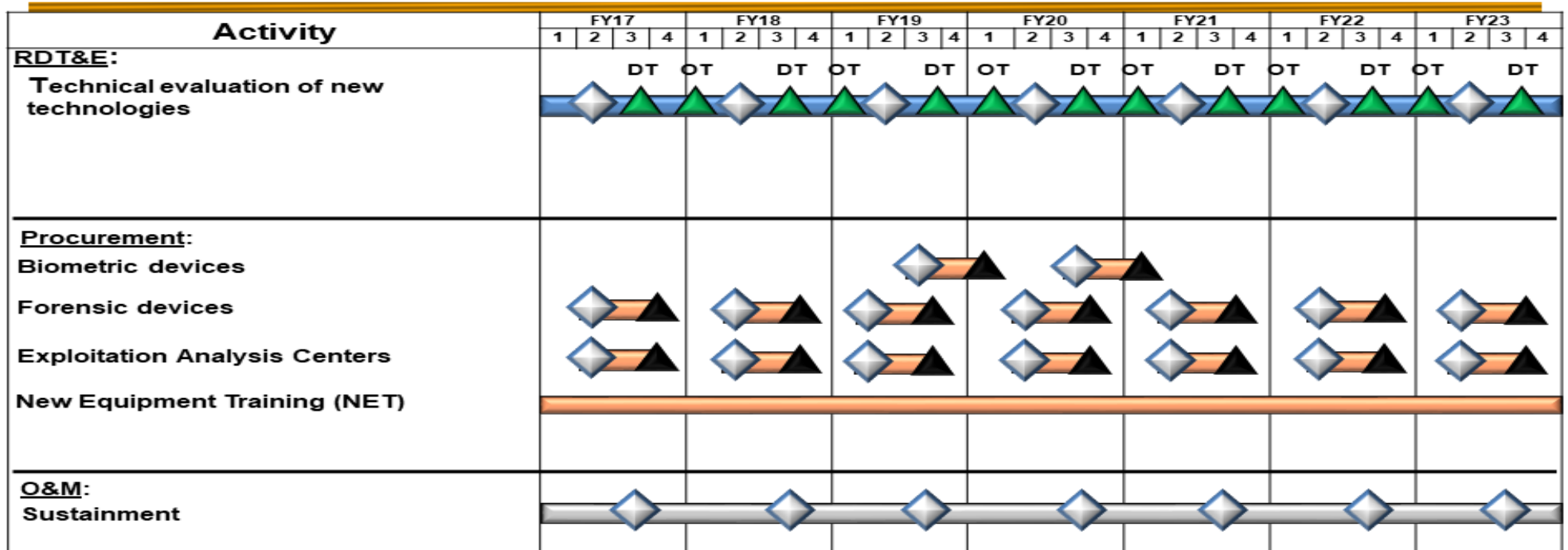
ISP Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

Sensitive Site Exploitation Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>National Systems Support to SOF Participation in Space Technology Development and Integration</i>				
National System Support to SOF Participation in Space Technology Development and Integration	2	2017	4	2021
<i>Joint Threat Warning System</i>				
Air Variant Development, Test and Evaluation	2	2017	4	2023
Ground Sigint Kit Variant Development, Test and Evaluation	2	2017	4	2023
Maritime Variant Development, Test and Evaluation	4	2017	4	2023
<i>Hostile Forces - Tagging, Tracking, and Locating</i>				
Product Development	2	2017	4	2021
Device Integration and Operational Testing	3	2017	4	2021
<i>Special Operations Tactical Video System</i>				
System Integration and Operational Testing	3	2017	4	2021
<i>Special Operations Forces Planning, Rehearsal & Execution Preparation</i>				
Operational Test and Evaluation	2	2017	4	2023
<i>Integrated Survey Program</i>				
Product Development	2	2017	4	2023
<i>Sensitive Site Exploitation</i>				
System Integration and Operational Testing	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160408BB / <i>Operational Enhancements</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	1,315.797	52.495	81.375	102.307	3.632	105.939	132.143	121.579	124.356	133.148	Continuing	Continuing
S500A: <i>Operational Enhancements</i>	1,315.797	52.495	81.375	102.307	3.632	105.939	132.143	121.579	124.356	133.148	Continuing	Continuing

A. Mission Description and Budget Item Justification

Details are provided under separate cover.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	90.895	81.375	80.328	0.000	80.328
Current President's Budget	52.495	81.375	102.307	3.632	105.939
Total Adjustments	-38.400	0.000	21.979	3.632	25.611
• Congressional General Reductions	-10.000	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.400	-			
• SBIR/STTR Transfer	-2.000	-			
• Other	-26.000	-	21.979	3.632	25.611

Change Summary Explanation

Funding:

FY2017: Decrease of -\$38.400 million is due to congressional reduction for prior year carryover (-\$10.000 million), transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs (-\$2.000 million) and emergency warfighting readiness requirements not supported by Congress (-\$26.000 million) and reprogramming higher command priorities (-\$.400 million). Details available under separate cover.

FY2018: None.

FY2019: Net increase of \$25.611 million due to FY 2019 funding request reduction of -\$4.783 million to account for the availability of prior year execution balances, an increase of \$26.762 million baseline funding and \$3.632 million Overseas Contingence Operations (OCO) funding. Details available under separate cover.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160408BB / <i>Operational Enhancements</i>

Schedule: None.

Technical: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	68.917	67.086	45.935	46.942	11.040	57.982	68.336	45.098	32.964	41.535	Continuing	Continuing
D476: <i>Military Information Support Operations</i>	11.647	3.176	4.843	3.942	-	3.942	2.950	2.958	1.792	1.828	Continuing	Continuing
S375: <i>Weapons Systems</i>	1.982	1.422	1.480	1.198	-	1.198	1.633	1.611	1.535	1.566	Continuing	Continuing
S385: <i>Soldier Protection and Survival Systems</i>	7.179	10.376	2.852	7.901	3.000	10.901	8.851	4.785	4.744	4.834	Continuing	Continuing
S385A: <i>Body Armor and Associated Equipment</i>	4.945	1.385	1.289	1.048	-	1.048	1.760	1.746	1.701	1.735	Continuing	Continuing
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	4.010	7.373	1.517	1.257	-	1.257	1.727	1.698	1.620	1.652	Continuing	Continuing
S700: <i>Communications Equipment and Electronics Systems</i>	12.606	9.037	12.864	13.966	-	13.966	16.605	16.773	11.729	11.965	Continuing	Continuing
S710: <i>Tactical Systems Development</i>	1.812	1.083	2.416	4.240	-	4.240	3.328	3.359	3.117	3.180	Continuing	Continuing
S725: <i>Tactical Radio Systems</i>	9.684	3.620	13.183	4.660	-	4.660	10.691	7.286	1.871	1.909	Continuing	Continuing
S800: <i>Munitions Advanced Development</i>	15.052	29.614	5.491	8.730	8.040	16.770	20.791	4.882	4.855	12.866	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for development, testing and integration of specialized equipment in the areas of automation, communication, radio, weapon, soldier protection and survival, visual augmentation, lasers and sensors, munition and Military Information Support Operations (MISO) systems. Warrior Systems specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Special Operation Forces (SOF) must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success. The efforts within this PE improve SOF warfighting capabilities by continuing efforts to develop smaller, lighter, more efficient and more robust capabilities. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability while, generally, being conducted in harsh environments for unspecified periods and in locations requiring small unit autonomy. Communications efforts will maintain a Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams, and provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies and allied foreign forces. Efforts relating to soldier protection and survival requirements will improve

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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survivability and mobility of SOF while conducting varied missions. Specialized visual augmentation, lasers and sensors will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Munition efforts include advanced engineering operational system development and qualification efforts related to SOF-peculiar munitions and equipment. Additionally, MISO efforts include planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups and individuals.

MISO:

This project provides for the development, test and integration of MISO equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct the seven phase MISO process (planning, targeting audience analysis, series development, product development and design, approval, production/distribution/dissemination, and measures of effectiveness) in support of combatant commanders.

Weapons Systems:

This project provides for next generation system development and pre-planned product improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of SOF. Efforts include muzzle brakes and suppressors, and P3I for assault, sniper, and crew served weapons leveraging the latest technological advances to achieve overmatch capability against emerging threats.

Soldier Protection and Survival Systems:

This project provides for the development, testing, integration, and evaluation of specialized equipment, to meet the unique soldier protection and survival requirements of SOF in varied missions; counter-improvised explosive device systems, to meet continually emerging Counter RC-IED threats; and signature reducing materials and technologies, to reduce the probability of detection by battlefield threat sensors.

Body Armor and Associated Equipment:

This project provides specialized equipment with ballistic protection to meet the unique soldier protection and survival requirements of SOF. Specialized ballistic equipment improves survivability and load bearing equipment impacting the mobility of SOF while conducting varied missions. This project enhances the SOF Personal Equipment Advanced Requirements program by providing for the research, development, and testing of body armor plates, soft armor, helmets, eye protection, and other personal protective equipment to meet current ballistic threats that exist on the battlefield.

Visual Augmentation, Lasers and Sensor Systems:

This project provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of SOF. Programs in this area include binocular/monocular devices and visual augmentation to include next generation laser designation and geo-location systems.

Communications Equipment and Electronics Systems:

This project provides for communication systems to meet emergent requirements to support SOF. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. SOF Communications Equipment and Electronics is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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Tactical Systems Development:

This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of SOF. Tactical systems provide forward deployed forces with advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control (C2) of forces.

Tactical Radio Systems:

This project is for the development of all SOF tactical radio programs. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. SOF Tactical Radios provide the critical C3 link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied/coalition forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed C2 communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

Munitions Development:

This project provides for the advanced engineering, operational system development, and qualification efforts related to SOF-peculiar and Foreign/Non-standard munitions and equipment. Funding supports development of Insensitive Munitions (IM) technology and evaluation, in accordance with statutory requirement set forth in U.S. Code, Title 10, Chapter 141, Section 2389 (December 2001). Testing is in accordance with the USSOCOM IM Strategic Plan. Funding also supports efforts to develop and improve Stand-Off Precision Guided Munitions (SOPGM), including the development and integration of improved warheads, seeker, guidance navigation and control systems, operational flight software and missile delivery to meet SOF requirements. Provides for testing and integration of Lethal Miniature Aerial Munition Systems (LMAMS) onto SOF-unique platforms to meet the operational needs of the SOF operator in high threat environments.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	45.285	45.935	32.761	-	32.761
Current President's Budget	67.086	45.935	46.942	11.040	57.982
Total Adjustments	21.801	0.000	14.181	11.040	25.221
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	21.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.233	-			
• SBIR/STTR Transfer	-2.432	-			
• Other Adjustments	-	-	14.181	11.040	25.221

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>	FY 2017	FY 2018
Project: S395: <i>Visual Augmentation, Lasers and Sensor Systems</i> Congressional Add: <i>Visual Augmentation Systems (VAS)</i>	2.880	-
Congressional Add Subtotals for Project: S395	2.880	-
Project: S800: <i>Munitions Advanced Development</i> Congressional Add: <i>SOPGM</i> Congressional Add: <i>LMAMS</i>	11.563	-
Congressional Add Subtotals for Project: S800	5.809	-
Congressional Add Subtotals for Project: S800	17.372	-
Congressional Add Totals for all Projects	20.252	-

Change Summary Explanation

Funding:

FY 2017: Net increase of \$21.801 million is due to Congressional adds for Visual Augmentation System (VAS) (\$3.000 million) and two Munitions Advanced Development (\$18.000 million), a decrease for a transfer to Small Business Innovative Research/Small Business Technology Transfer programs (-\$2.432 million), reprogramming increases in projects S385 for Counter Radio Controlled Improvised Explosive Device (\$7.501 million), S385A Body Armor and associated Equipment (\$0.100 million), S395 VAS (\$3.087 million), and reprogramming decreases to projects S710 Communications Equipment and Electronics Systems (-\$1.472 million), D476 MISO (-\$1.384 million), S725 Tactical Radio Systems (-\$0.139 million), S800 Munitions Advanced Development (-\$4.460 million) for higher Command priorities.

FY 2018: None.

FY 2019: Net increase of \$14.181 million is due FY 2019 funding request reduction of -\$2.634 million to account for the availability or prior year execution balances, a -\$0.123 million decrease for a Department economic assumptions, a \$1.284 million reprogramming increase in project D476 MISO for the Long-Range Broadcast System, a \$5.624 million increase in project S385.PR Soldier Protection and Survival Systems for Personal Signature Management and Tactical Casualty Combat Care, a \$1.925 million increase in project S710.PR Tactical Systems Development, secure wireless and cross domain solution on TACLAN modular systems, and a \$8.105 million increase to project S800 Advanced Munitions Development for engineering, integration and testing.

FY2019 Overseas Contingency Operations (OCO): Increase of \$11.040 million due to \$8.040 million increase of OCO funding in project S800 Advanced Munitions Development for SOPGM and a \$3.000 million increase of OCO funding in project S385 Soldier Protection and Survival Systems.

Schedule: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160431BB / <i>Warrior Systems</i>

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) D476 / <i>Military Information Support Operations</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
D476: <i>Military Information Support Operations</i>	11.647	3.176	4.843	3.942	-	3.942	2.950	2.958	1.792	1.828	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and acquisition of Military Information Support Operations (MISO) equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct MISO in support of combatant commanders.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Title: Multi-Mission Payload (MMP) formerly know as Long Range Broadcast System (LRBS)</p> <p>Description: The MMP is a family of broadcast systems intended to be integrated into multiple manned and unmanned, long-loiter aerial systems with the capability of broadcasting in AM, FM, SW, TV, Very High Frequency (VHF), TV Ultra High Frequency (UHF) and cellular (Short Message Service, Multi-Media Messaging Service, and Voice). This system provides the capability of broadcasting MISO messages via multiple mediums into permissive, semi-permissive, and denied foreign areas.</p> <p>FY 2018 Plans: Continue with primary development, systems engineering, and test and evaluation of pod-based cellular and television broadcast, power, and antenna technologies.</p> <p>FY 2019 Base Plans: Continues with primary development, systems engineering, and test and evaluation of pod-based cellular and television broadcast, power, and antenna technologies.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.584 million is due to expanded development testing.</p>	1.502	1.632	2.181	-	2.181
<p>Title: Fly-Away Broadcast System (FABS)</p> <p>Description: FABS is a transit case fly-away broadcast system that consists of a combination of AM, FM, SW, cellular, and TV transmitters.</p> <p>FY 2018 Plans:</p>	1.674	2.757	0.900	-	0.900

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Continue testing and evaluation of new systems and components to enhance MISO broadcasts. Continue with primary hardware development to reduce broadcast system weight and size while adding multi-mission capabilities.</p> <p>FY 2019 Base Plans: Continues testing and evaluation of new systems and components to enhance MISO broadcasts. Continues with primary hardware development to reduce broadcast system weight and size while adding multi-mission capabilities.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of -\$1.857 million due to a realignment to higher command priorities.</p>					
<p>Title: Next Generation Loud Speakers (NGLS)</p> <p>Description: Family of Loudspeakers (FOL) are portable loudspeaker systems that are capable of disseminating high quality recorded and live audio messages by MISO forces in varied geographical areas and climate conditions. The new variant of the FOL is the NGLS. The NGLS consists of Dismounted and Mounted variants that are lighter, smaller, and louder than legacy speaker systems, with added clarity and durability. A variant of the NGLS, the Scatterable Media, Distributed Audio Media System (DAMS) is a hand-emplaced or air-delivered printed audio-visual device for disseminating delayed or on-cue messages to foreign target audiences.</p> <p>FY 2018 Plans: Begin development of new systems and components to enhance MISO broadcasts. Focuses on wireless, Common Operating Picture (COP), and Mobile Ad Hoc Network development to reduce broadcast system weight and size while adding multi-mission capabilities.</p> <p>FY 2019 Base Plans: Continues testing and evaluation of new systems and components to enhance MISO broadcasts. Focuses on wireless, COP, and Mobile Ad Hoc Network development to reduce broadcast system weight and size while adding multi-mission capabilities. Begins development of scatterable media capabilities.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of -\$0.866 million is due to a realignment to higher command priorities.</p>	-	0.454	0.861	-	0.861
Accomplishments/Planned Programs Subtotals	3.176	4.843	3.942	-	3.942

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1/0204OTHER: <i>OTHER ITEMS <\$5M</i>	77.231	54.592	112.117	7.700	119.817	94.206	95.898	89.320	85.302	Continuing	Continuing

Remarks

D. Acquisition Strategy

- The MMP program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The FABS program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The FOL program has an evolutionary acquisition strategy for the Next Generation Load Speaker (NGLS). Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Multi-Mission Payload (MMP)	MIPR	NSWC-Crane : Crane, IN	5.335	1.502	Feb 2017	1.532	Jan 2018	2.038	Jan 2019	-		2.038	Continuing	Continuing	-
Fly Away Broadcast Systems (FABS)	Reqn	JHU/APL : Laurel, MD	-	1.674	Feb 2017	2.757	Jan 2018	0.900	Jan 2019	-		0.900	Continuing	Continuing	-
Next Generation Loud Speakers (NGLS)	Allot	SOFSA : Lexington, KY	-	-		0.454	Jan 2018	0.761	Jan 2019	-		0.761	Continuing	Continuing	-
Prior Year	C/Various	Various : Various	5.846	-		-		-		-		-	Continuing	Continuing	-
Subtotal			11.181	3.176		4.743		3.699		-		3.699	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MMP	MIPR	NSCW-Crane : Crane, IN	0.341	-		0.100	Jan 2018	0.143	Jan 2019	-		0.143	Continuing	Continuing	-
NGLS	Allot	SOFSA : Lexington, KY	-	-		-		0.100	Feb 2019	-		0.100	Continuing	Continuing	-
Prior Year	MIPR	Various : Various	0.125	-		-		-		-		-	Continuing	Continuing	-
Subtotal			0.466	-		0.100		0.243		-		0.243	Continuing	Continuing	N/A

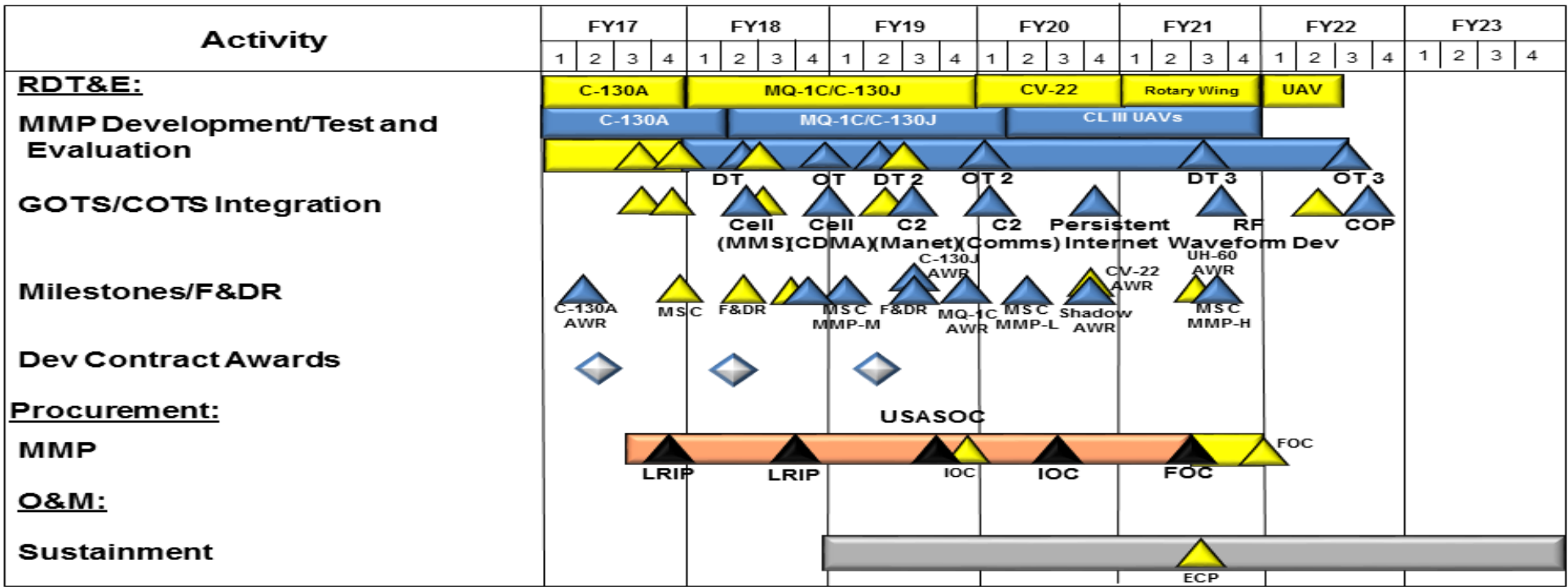
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		11.647	3.176	4.843	3.942	3.942	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) D476 / Military Information Support Operations

MMP Schedule



◆ Award
 ▲ Article Delivery
 ▲ RDT&E
 ▲ Procurement
 ▲ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>

Fly Away Broadcast System Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E	<div style="background-color: #4F81BD; color: white; padding: 5px;"> * FABS Development/Test and Evaluation </div>																											
O&M	<div style="background-color: #4F81BD; color: white; padding: 5px;"> FABS v3 Dev </div>																											
FABS v2.2	<div style="background-color: #4F81BD; color: white; padding: 5px;"> Persistent Internet </div>																											
FABS v3	<div style="background-color: #4F81BD; color: white; padding: 5px;"> Multi-Mission Dev Phase I </div>																											
Cellular Broadcast Lite	<div style="background-color: #4F81BD; color: white; padding: 5px;"> Multi-Mission Dev Phase II </div>																											
FABS Broadcast Support Vehicle	<div style="background-color: #4F81BD; color: white; padding: 5px;"> RF Waveform & COP Development </div>																											
FABS Sustainment	<div style="background-color: #4F81BD; color: white; padding: 5px;"> DT/OT </div>																											
FABS v2.2	<div style="background-color: #A9A9A9; padding: 5px;"> FOC </div>																											
FABS v3	<div style="background-color: #A9A9A9; padding: 5px;"> SDN Interop Integration </div>																											
Cellular Broadcast Lite	<div style="background-color: #A9A9A9; padding: 5px;"> FOC </div>																											
FABS Broadcast Support Vehicle	<div style="background-color: #A9A9A9; padding: 5px;"> SDN Interop Integration </div>																											
FABS Sustainment	<div style="background-color: #A9A9A9; padding: 5px;"> MSC </div>																											
FABS v2.2	<div style="background-color: #A9A9A9; padding: 5px;"> NET FOC </div>																											
FABS v3	<div style="background-color: #A9A9A9; padding: 5px;"> ATO NET FOC </div>																											
Cellular Broadcast Lite	<div style="background-color: #A9A9A9; padding: 5px;"> NET FOC </div>																											
FABS Broadcast Support Vehicle	<div style="background-color: #A9A9A9; padding: 5px;"> FABS v3 Integration </div>																											
FABS Sustainment	<div style="background-color: #A9A9A9; padding: 5px;"> Multi-Mission Integration </div>																											
FABS v2.2	<div style="background-color: #A9A9A9; padding: 5px;"> Multi-Mission Integration Phase I </div>																											
FABS v3	<div style="background-color: #A9A9A9; padding: 5px;"> Multi-Mission Integration Phase II </div>																											
Cellular Broadcast Lite	<div style="background-color: #A9A9A9; padding: 5px;"> CERP </div>																											
FABS Broadcast Support Vehicle	<div style="background-color: #A9A9A9; padding: 5px;"> LCSM Contract Award </div>																											

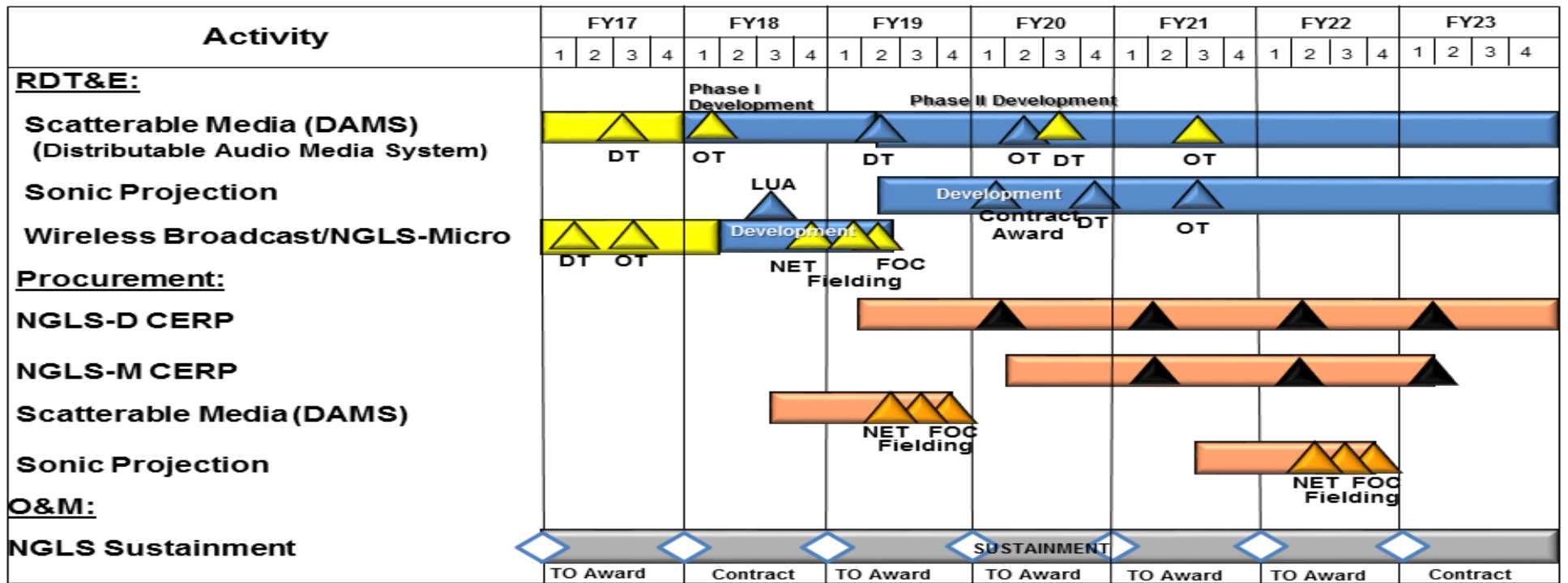
◆ Article Award
 ▲ Article Delivery
 ▲ RDT&E
 ▲ Procurement
 ▲ O&M
 ▲ Previously Reported

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
D476 / Military Information Support Operations

Next Generation Loudspeaker System Schedule



◇ Article Award
 ▲ Article Delivery
 ▲ RDT&E
 ▲ Procurement
 ▲ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Multi-Mission Payload (MMP)</i>				
Development	1	2017	4	2021
Test and Evaluation	2	2018	3	2022
<i>Fly Away Broadcast Systems (FABS)</i>				
Development	1	2017	4	2023
<i>Next Generation Loudspeakers (NGLS)</i>				
Scatterable Media Development	1	2018	1	2019
Scatterable Media Test and Evaluation	2	2019	4	2023
Sonic Projection Development	2	2019	2	2020
Sonic Projection Development Test and Evaluation	3	2019	4	2023
Wireless Broadcast	2	2018	2	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S375 / <i>Weapons Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S375: <i>Weapons Systems</i>	1.982	1.422	1.480	1.198	-	1.198	1.633	1.611	1.535	1.566	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and testing of specialized, common caliber, individual, sniper, machine gun, pistol, crew served weapons systems and accessories that enable SOF to accurately engage enemy personnel and material in all SOF environments at ranges up to 1500 meters. Weapons include common caliber modular assault rifles to engage out to 600 meters, Sniper Support Rifles to engage out to 800 meters, sniper rifles to engage out to 1500 meters, shoulder fired Grenade Launchers, vehicle and man-portable high velocity grenade launchers, pistols, machine guns to engage out to 1000 meters, multi-barreled mini-guns which can be mounted on boats, vehicles, aircraft, and ground mounted to engage out to 3,500 meters.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Weapons Accessories (WPNAC)	1.422	1.480	1.198	-	1.198
Description: WPNAC are used on both service-common and SOF weapons, enabling the operator to tailor the configuration of the weapon to the assigned mission and operational environment, enhancing the overall effectiveness of the weapons, which enables mission accomplishment and operator survivability.					
FY 2018 Plans: Develop enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons.					
FY 2019 Base Plans: Continues development of enhanced capabilities to improve performance of individual sniper, rifle, and machine gun weapons.					
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of -\$0.282M to support higher command priorities.					
Accomplishments/Planned Programs Subtotals	1.422	1.480	1.198	-	1.198

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems <\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.645	304.301	282.452	295.368	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

Evolutionary acquisition, leveraging emerging technology. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition with firm-fixed price contracts.

E. Performance Metrics

N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Weapon Test & Evaluation	MIPR	Various : Various	1.982	1.422	Jan 2017	1.480	Jan 2018	1.198	Jan 2019	-		1.198	Continuing	Continuing	-
Subtotal			1.982	1.422		1.480		1.198		-		1.198	Continuing	Continuing	N/A
Project Cost Totals			1.982	1.422		1.480		1.198		-		1.198	Continuing	Continuing	N/A

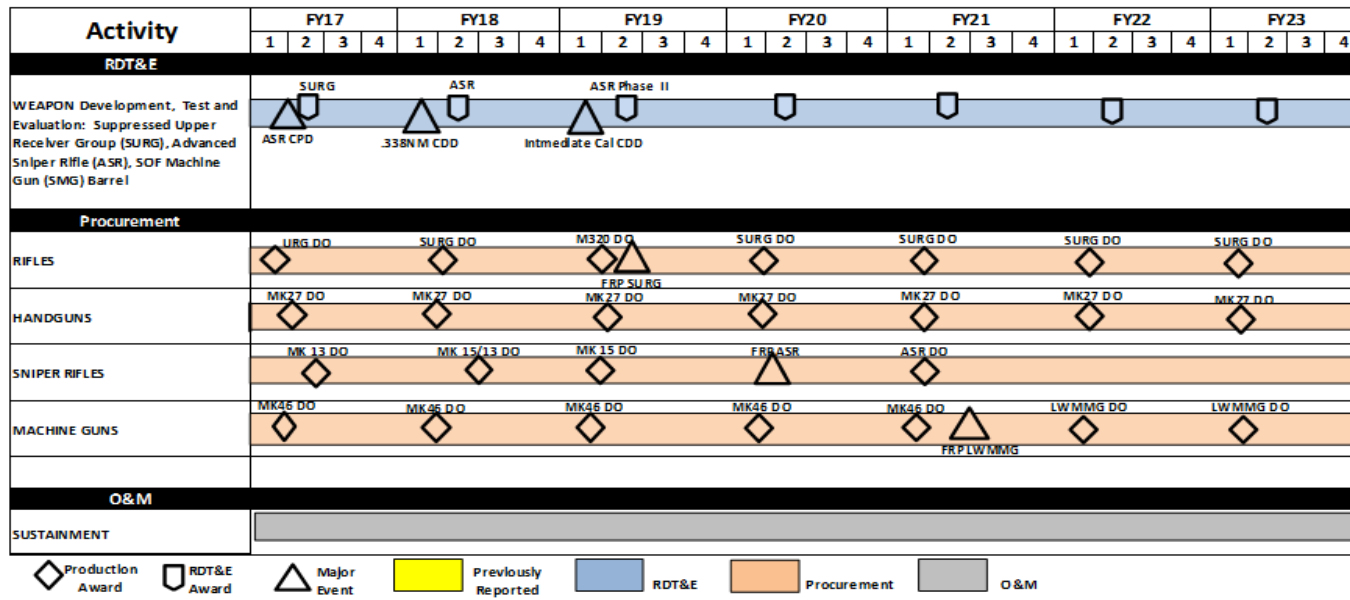
Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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Weapon Systems Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Weapon Systems</i>				
WEAPON Development, Test and Evaluation: Suppressed Upper Receiver Group (SURG), Advanced Snipe Rifle (ASR), SOF Machine Gun (SMG) Barrel	2	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S385: <i>Soldier Protection and Survival Systems</i>	7.179	10.376	2.852	7.901	3.000	10.901	8.851	4.785	4.744	4.834	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides development, testing, and evaluation of signature reducing materials and technology and specialized equipment to meet the unique operator protection and survival requirements for Special Operations Forces (SOF), which include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized equipment improves survivability protection from the environment by providing the operator with hearing protection and clothing systems, load bearing equipment, and personnel safety equipment to improve the mobility of SOF, while conducting varied missions. Signature reducing materials and technology reduce the probability of detection by battlefield threat sensors. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SOF Personal Equipment Advanced Requirements (SPEAR)	0.456	0.493	0.880	-	0.880
Description: The SPEAR program provides for the research, development, testing and evaluation of a variety of individual and survival equipment to include: ballistic and environmental protective combat uniforms, load carriage systems, communications headsets, and visual augmentation system mounts.					
FY 2018 Plans: Continue research and development of land communications material solutions and environmental protective combat uniforms. Continue materials testing and incorporation into commodity lines. Begin wireless headset evaluations. Complete interoperability of headsets with SOCOM handheld radios.					
FY 2019 Base Plans: Continues research and development of land communications material solutions and environmental protective combat uniforms. Continues materials testing and incorporation into commodity lines. Continues wireless headset evaluations. Continues interoperability of headsets with radios and integrated communication systems.					
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.387M provides for the development and testing of wireless communications and environmental protective combat uniforms.					
Title: Tactical Combat Casualty Care (TCCC)	0.380	0.199	0.178	-	0.178

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Description: TCCC provides medical devices, ancillary equipment and Casualty Evacuation (CASEVAC) sets for SOF. The CASEVAC procures a suite of Food and Drug Administration approved medical items including, but not limited, to intraosseous infusion devices, patient monitoring and assessment devices, emergency airway kits, as well as devices that provide SOF the capability to support extraction, extrication, mobility, transportation, and sustainment of casualties in forward areas. This program fields tactical medical and CASEVAC capabilities with the intention to transition capabilities developed under the National Mission Force Tactical Medical Programs. This capability provides significant ability to lessen battlefield losses by providing timely, critical lifesaving and evacuation capabilities to the forward-deployed SOF operators.</p> <p>FY 2018 Plans: Provide for test support to include program management, market surveys, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Support the evaluation of enhanced medical monitoring systems for incorporation into the CASEVAC program. Develop and test water resistant solutions for maritime operations of components within the CASEVAC set.</p> <p>FY 2019 Base Plans: Continues test support to include program management, market surveys, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Continues the evaluation of enhanced medical monitoring systems for incorporation into the CASEVAC program. Continues development and testing of water resistant solutions for maritime operations of components within the CASEVAC set.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was reduced by \$0.021 million to account for the availability of prior year execution balances.</p>					
<p>Title: Counter Radio Controlled-Improvised Explosive Device (RC-IED)</p> <p>Description: The Counter RC-IED program provides SOF with the ability to counter current and future RC-IED threats used by terrorist networks.</p> <p>FY 2018 Plans: Continue NAG test support to the Counter RC-IED program. Support system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintain range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Continue development and testing of ECM systems capability to include advanced software technique countermeasures</p>	9.540	2.160	5.179	3.000	8.179

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>and loadsets for mounted and dismounted systems. Implement Modi software refactoring, improving stability and future technology integration.</p> <p>FY 2019 Base Plans: Continues National Assessment Group (NAG) test support to the Counter RC-IED program. Continues system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintains range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Continues development and testing of Electronic Counter Measures (ECM) systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Continues implementation of Modi software refactoring, improving stability and future technology integration.</p> <p>FY 2019 OCO Plans: Continues the development of Counter - Unmanned Aerial Systems (C-UAS) technology and integration efforts in support of named operations.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Details provided under separate cover.</p>					
<p>Title: Personal Signature Management (PSM)</p> <p>Description: This project provides for development, test, and evaluation of signature reducing materials and technology, in order to reduce the probability of detection by battlefield threat sensors.</p> <p>FY 2019 Base Plans: Provides research, development, test and evaluation of next generation signature reducing solutions. Provides for program management, market research, test item acquisition and test and evaluation, in support of PSM efforts for both land and maritime operations.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.664 million is due to a transfer of funding from Program Element 1160432BB, Special Programs, Project S500E.</p>	-	-	1.664	-	1.664
Accomplishments/Planned Programs Subtotals	10.376	2.852	7.901	3.000	10.901

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command			Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>	

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019	FY 2019	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Cost To	
			Base	OCO	Total					Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.645	304.301	282.452	295.368	Continuing	Continuing

Remarks

D. Acquisition Strategy

Counter Radio Controlled - Improvised Explosive Device (RC-IED): USSOCOM collaborates with the DoD Joint CREW single manager per DODI 5101.14 and other government agencies in order to maintain Joint Force compatibility and improve program affordability. All next generation Electronic Countermeasures (ECM) development designed as National to Theater ("N-to-T") transition programs. Centralized life cycle sustainment of SOF CREW inventory supports TSOC operational demand as theater provided equipment (TPE). Evolving ECM capability to Counter Unmanned Aerial Systems (CUAS) emerging threats.

Personal Signature Management (PSM): Signature reducing technologies will be embedded into current SOF clothing and equipment or applied to modified commercial-off-the-shelf variants. Capability is not intended to replace current clothing and equipment, rather it will augment those units with a unique requirement for enhanced signature reduction. Contracts in support of fielding/sustainment of PSM clothing and equipment will be a combination of sole source firm fixed price 5-year indefinite delivery indefinite quantity contracts, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts. PSM will utilize SOFSA for warehousing and sustainment, PM-SOF SSES has cradle to grave responsibility.

Tactical Combat Casualty Care (TCCC): Operator & Medic Kits - Program managed by PM-SOF SSES using US Army Medical Materiel Agency prime vendor contracts for equipment purchases and the Special Operations Forces Support Activity (SOFSA) for warehousing and sustainment. CASEVAC Set - Program managed by PM-SOF SSES and utilizes and Indefinite Delivery Indefinite Quantity Commercial-Off-The-Shelf prime integrator contract.

SPEAR: Contracts in support of SPEAR are a combination of firm fixed price five year indefinite delivery indefinite quantity with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple awards.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S385 / Soldier Protection and Survival Systems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF Personal Equipment Advanced Requirements (SPEAR) - Protective Combat Uniform (PCU)	Various	PM-SSES : Natick, MA	0.331	-		0.116	Jan 2018	0.200	Jan 2019	-		0.200	Continuing	Continuing	-
SPEAR Modular Glove System (MGS)	Various	PM-SSES : Natick, MA	0.040	-		-		0.010	Jan 2019	-		0.010	Continuing	Continuing	-
SPEAR - Modular Integrated Communications Helmet/Land Maritime Communication System	Various	PM-SSES : Natick, MA	0.865	0.230	Mar 2017	0.100	Jan 2018	0.150	Feb 2019	-		0.150	Continuing	Continuing	-
SPEAR - Load Carriage System (LCS) and Backpacks	Various	PM-SSES : Natick, MA	0.035	0.010	Jan 2017	0.010	Feb 2018	0.050	Mar 2019	-		0.050	Continuing	Continuing	-
Subtotal			1.271	0.240		0.226		0.410		-		0.410	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SPEAR - PCU testing/P3I	Various	PM-SSES : Natick, MA	0.256	-		0.100	Mar 2018	0.200	Feb 2019	-		0.200	Continuing	Continuing	-
SPEAR-MGS Test and Evaluation	Various	PM-SSES : Natick, MA	0.091	-		-		0.010	Jan 2019	-		0.010	Continuing	Continuing	-
SPEAR - Maritime Comms Test and Evaluation	Various	PM-SSES : Natick, MA	1.357	0.211	Feb 2017	0.162	Jan 2018	0.210	Jan 2019	-		0.210	Continuing	Continuing	-
SPEAR - LCS/Body Armor Vest/Backpack Material and Prototype Test and Evaluation	Various	PM-SSES : Natick, MA	0.062	0.005	Jan 2017	0.005	Feb 2018	0.050	Jan 2019	-		0.050	Continuing	Continuing	-
Tactical Combat Casualty Care CASEVAC Sets	Various	PM-SSES : Natick, MA	0.995	0.380	Apr 2017	0.199	Feb 2017	0.178	Feb 2019	-		0.178	Continuing	Continuing	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

SPEAR Schedule

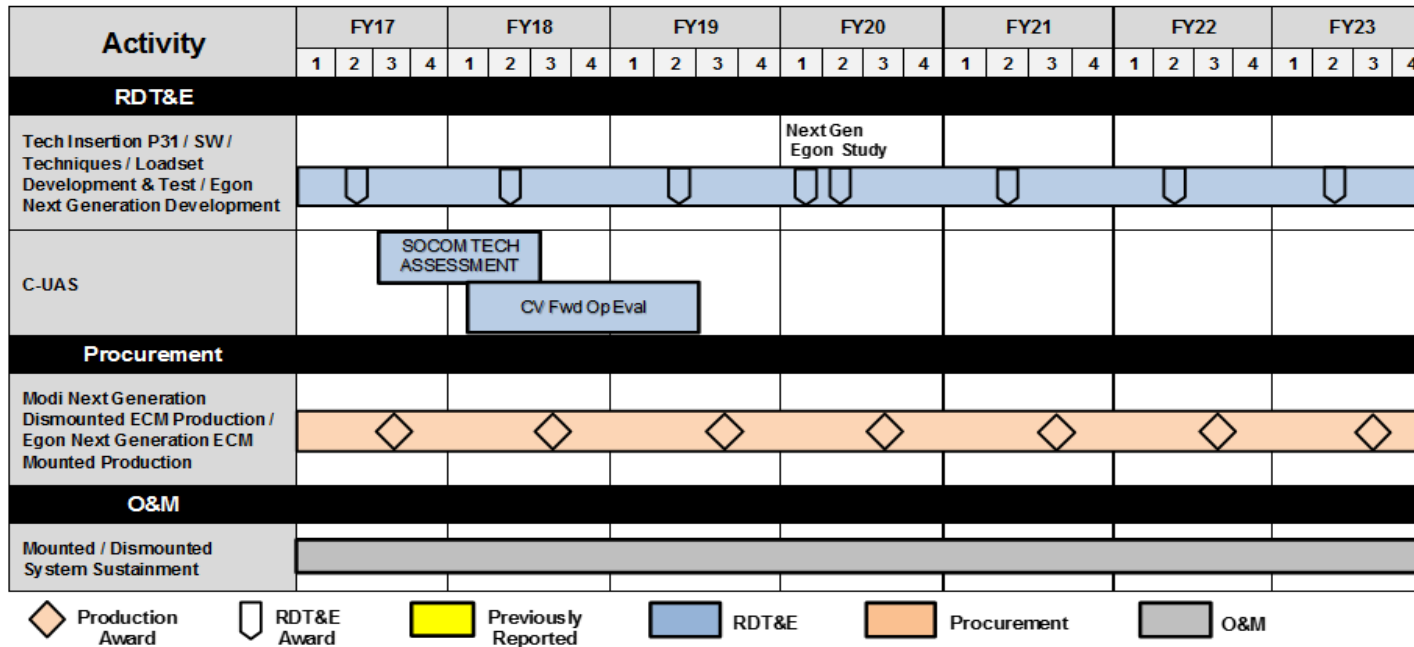
Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
RDT&E																																
Product Development -Protective Combat Uniform (PCU)	U				U				U				U				U				U				U				U			
Product Development - Modular Integrated Communications Helmet (MICH) Comms/Land Maritime Communication System	U				U				U				U				U				U				U				U			
Product Development - Modular Glove System (MGS)					U				U				U				U				U				U				U			
Product Development - Load Carriage System (LCS) and Backpacks					U				U				U				U				U				U				U			
Test & Evaluation - Signature Management Profile	U																															
Test & Evaluation PCU	U				U				U				U				U				U				U				U			
Test & Evaluation MGS	U				U				U				U				U				U				U				U			
Test & Evaluation Comms	U				U				U				U				U				U				U				U			
Test & Evaluation LCS/Backpack/Body Armor Vest	U				U				U				U				U				U				U				U			
O&M																																
Sustainment all capabilities	D				D				D				D				D				D				D				D			

◇ Production Award
 U RDT&E Award
 △ Major Event
 ■ Previously Reported
 ■ RDT&E
 ■ Procurement
 ■ O&M

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

Counter RC-IED Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

Personnel Signature Management Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
RDT&E																																
Personal Signature Management (PSM) - Development (Incr II)									◻				△																			
Personal Signature Management (PSM) - Development (Incr III)										◻				△																		
PSM - Test and Evaluation																																
Procurement																																
PSM (Incr II/III)																																
O&M																																
PSM Sustainment (Incr II/III)									◊				◊				◊				◊				◊				◊			
Signature Management Training Program (SMTP)															◊												◊					
◊ Production Award ◻ RDT&E Award △ Major Event ◻ Previously Reported ◻ RDT&E ◻ Procurement ◻ O&M																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Soldier Protection and Survival Systems</i>				
Protective Combat Uniform (PCU) Product Development	2	2017	4	2023
Modular Integrated Communications Helmet (MICH) Comms/Land Maritime Communication System Product Development	2	2017	4	2023
Modular Glove System (MGS) Product Development	3	2018	4	2023
Load Carriage System (LCS) and Backpacks Product Development	3	2018	4	2023
PCU Test & Evaluation	1	2017	4	2023
MGS Test & Evaluation	1	2017	4	2023
Comms Test & Evaluation	1	2017	4	2023
LCS/Backpack/Body Armor Vest Test & Evaluation	1	2017	4	2023
<i>Tactical Combat Casualty Care</i>				
TCCC CASEVAC Sets Development, Test & Evaluation	2	2017	4	2023
<i>Counter Radio Controlled-Improvised Explosive Device</i>				
National Assessment Group Test Support	1	2017	4	2023
C-UAS	3	2017	3	2019
<i>Personnel Signature Management (PSM)</i>				
PSM Development (Incr II)	1	2019	4	2023
PSM Development (Incr III)	1	2019	4	2023
PSM Test & Evaluation	1	2019	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S385A: <i>Body Armor and Associated Equipment</i>	4.945	1.385	1.289	1.048	-	1.048	1.760	1.746	1.701	1.735	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides specialized equipment to meet the unique operator protection and survival requirements of SOF, to include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized ballistic equipment improves survivability impacting the mobility of SOF while conducting varied missions. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SOF Personal Equipment Advanced Requirement (SPEAR)-Ballistic Protection	1.385	1.289	1.048	-	1.048
Description: This project enhances the SPEAR program by supporting body armor plates, soft armor, helmets, and eye protection. It also provides for the research, development, and testing of a variety of body armor and personal protective equipment.					
FY 2018 Plans: Continue foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continue development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continue evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Initiate development and testing of technologies to upgrade the maritime crewman helmet.					
FY 2019 Base Plans: Continues foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continues development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continues evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Continues development and testing of technologies to upgrade the maritime crewman helmet.					
FY 2018 to FY 2019 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
The FY 2019 funding request was reduced by -\$0.230 million to account for the availability of prior year execution balances and -\$0.011 million reprogrammed to higher command priorities.					
Accomplishments/Planned Programs Subtotals	1.385	1.289	1.048	-	1.048

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.645	304.301	282.452	295.368	Continuing	Continuing

Remarks

D. Acquisition Strategy

SPEAR ballistic protection equipment takes advantage of modified commercial-off-the-shelf or non-developmental items. As USSOCOM required tailored solutions for SOF Mission sets, SPEAR items leveraged from industry are often on cutting edge of technology with modifications specific for SOF missions and require substantial testing in SOF environments. Utilizes SOFSA for warehousing and sustainment, PM-SOF SSES has cradle to grave responsibility. Contracts in support of SPEAR are a combination of firm fixed price five year indefinite delivery indefinite quantity with single vendor awards, Source America mandatory sole sources, small business set asides and prime vendor style multiple award contracts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF Personal Equipment Advanced Requirement (SPEAR) - Body Armor	Various	PM-SSES : Natick, MA	1.645	0.380	Feb 2017	0.500	Jan 2018	0.359	Feb 2019	-		0.359	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmets	Various	PM-SSES : Natick, MA	1.097	0.400	Jan 2017	0.226	Jan 2018	0.126	Jan 2019	-		0.126	Continuing	Continuing	-
SPEAR - Eye Protection	Various	PM-SSES : Natick, MA	0.176	0.010	Jul 2017	0.050	Mar 2018	0.050	Apr 2019	-		0.050	Continuing	Continuing	-
Subtotal			2.918	0.790		0.776		0.535		-		0.535	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SPEAR - Body Armor	Various	PM-SSES : Natick, MA	1.124	0.290	Feb 2017	0.322	Feb 2018	0.322	Feb 2019	-		0.322	Continuing	Continuing	-
SPEAR - Lightweight Ballistic Helmet	Various	PM-SSES : Natick, MA	0.781	0.300	Jan 2017	0.153	Feb 2018	0.153	Jan 2019	-		0.153	Continuing	Continuing	-
SPEAR - Transparent Armor	Various	PM-SSES : Natick, MA	0.122	0.005	Jun 2017	0.038	Mar 2018	0.038	Apr 2019	-		0.038	Continuing	Continuing	-
Subtotal			2.027	0.595		0.513		0.513		-		0.513	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		4.945	1.385	1.289	1.048	1.048	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / *Warrior Systems*

Project (Number/Name)
S385A / *Body Armor and Associated Equipment*

SPEAR – Body Armor Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E																												
Product Development Body Armor	□				□				□				□				□				□				□			
Product Development Lightweight Ballistic Helmets	□				□				□				□				□				□				□			
Product Development Eye Protection	□				□				□				□				□				□				□			
Test & Evaluation Body Armor	□				□				□				□				□				□				□			
Test & Evaluation Lightweight Ballistic Helmets	□				□				□				□				□				□				□			
Test & Evaluation -Transparent Armor	□				□				□				□				□				□				□			
O&M																												
Body Armor Sustainment	◆				◆				◆				◆				◆				◆				◆			
					Soft Armor IDIQ Contract Re compete				Hard Armor Contract Re compete																			
Lightweight Ballistic Helmet Sustainment	◆				◆				◆				◆				◆				◆				◆			
					Helmet ID IQ Contract Re compete																							
Eye Protection / Transparent Armor Sustainment	◆				◆				◆				◆				◆				◆				◆			
					Eye Protection P3I Award				Eye Protection P3I Award																			
◆ Production Award □ RDT&E Award △ Major Event ■ Previously Reported □ RDT&E ■ Procurement ■ O&M																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385A / <i>Body Armor and Associated Equipment</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Body Armor and Associated Equipment</i>				
Body Armor Product Development	2	2017	4	2023
Lightweight Ballistic Helmets Product Development	2	2017	4	2023
Eye Protection Product Development	3	2017	4	2023
Body Armor Test & Evaluation	2	2017	4	2023
Lightweight Ballistic Helmets Test & Evaluation	2	2017	4	2023
Transparent Armor Test & Evaluation	2	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	4.010	7.373	1.517	1.257	-	1.257	1.727	1.698	1.620	1.652	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for development, testing and integration of specialized visual augmentation, binocular and monocular night vision devices, laser markers, laser designators, geo-location systems, weapon optics, weapon aiming lasers, sensor systems, visible lights, infrared imagers, clandestine pointers, and accessories to meet the unique requirements of SOF. These projects ensure SOF systems will remain technologically superior to enemy threats and ensure mission success.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Visual Augmentation Systems	4.493	1.517	1.257	-	1.257
Description: Sensor technologies being developed include image intensification thermal imaging, short wave infrared, multi-spectral, fusion, and other sensor types. Developments will decrease weight, increase range, increase situational awareness, provide data, image processing, image filtering, determine wind speed, observe bullet trace, and sensor fusion to be able to detect, identify, classify and engage targets at greater ranges.					
FY 2018 Plans: Continue development and testing of visual augmentation and laser devices to improve situational awareness, sharing of data/images and target acquisition.					
FY 2019 Base Plans: Continues development and testing of visual augmentation and laser devices to improve situational awareness, sharing of data/images and target acquisition.					
FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was reduced by -\$0.260M to account for the availability of prior year execution balances and minor adjustments.					
Accomplishments/Planned Programs Subtotals	4.493	1.517	1.257	-	1.257

	FY 2017	FY 2018			
Congressional Add: Visual Augmentation Systems (VAS)	2.880	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>

	FY 2017	FY 2018
FY 2017 Accomplishments: Completed developmental test, evaluation, and integration of Augmented reality Technology and Countermeasure Studies of various Visual Augmentation System devices.		
Congressional Adds Subtotals	2.880	-

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.645	304.301	282.452	295.368	Continuing	Continuing

Remarks

D. Acquisition Strategy

Evolutionary acquisition, leveraging emerging technology. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. Full and open competition; Contracts are a combination of five-year Firm Fixed Price Indefinite Delivery Indefinite Quantity, small business set asides at several locations; primarily via Naval Surface Warfare Center, Crane Contracting office, USSOCOM Contracting Office and other contracting offices.

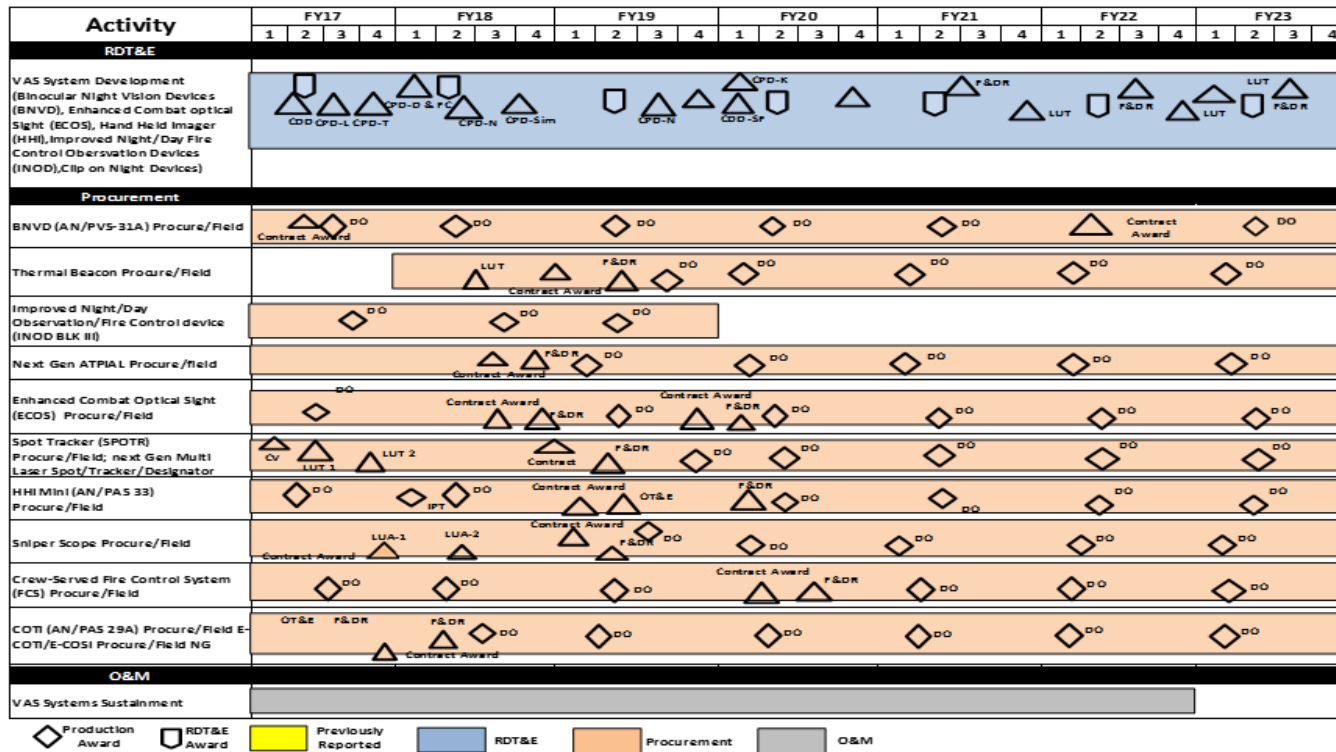
E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S395 / Visual Augmentation, Lasers and Sensor Systems

Visual Augmentation Systems Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S395 / <i>Visual Augmentation, Lasers and Sensor Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Visual Augmentation, Lasers and Sensor Systems</i>				
VAS System Development	2	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>S700: Communications Equipment and Electronics Systems</i>	12.606	9.037	12.864	13.966	-	13.966	16.605	16.773	11.729	11.965	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). Communications Equipment and Electronics Systems is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

USSOCOM's C4 systems comprise an integrated network of systems providing positive command and control and the timely exchange of information to all organizational echelons. The C4 systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the Global Information Grid (GIG). The GIG is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Satellite Deployable Node (SDN)	2.846	7.982	9.527	-	9.527
<p>Description: SDN is a family of deployable, super high frequency, multi-band, Satellite Communications (SATCOM) systems providing the transport path for high-capacity, voice, data, video tele-conferencing (VTC), and full motion video at all levels of classification. It consists of SDN subprograms, transport for intelligence variants, technology insertions and capital equipment replacement.</p> <p>FY 2018 Plans: Assess, test and evaluate wide-band Communications-on-the-Move (COTM) maritime, assessment of reduction of size, weight and power (SWAP), ground mobile, and airborne technologies. Continue Evolutionary Technology Insertion (ETI) integration. Evaluate new SATCOM constellations.</p> <p>FY 2019 Base Plans: Continues assessments, tests and evaluations for wide-band COTM maritime, continues assessments of reduction of size, weight and power (SWAP), ground mobile, and airborne technologies. Continues ETI integration. Continues evaluation of new SATCOM constellations. Evaluates resiliency of systems in a</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>degraded communication environment. Evaluates and tests SDN wireless and gray network capabilities. Evaluate and testing of mobile technologies.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$1.627 million supports testing and evaluation of the latest high throughput satellite terminals in support of the future SATCOM Constellations effort to evaluate resiliency of systems in a degraded communication environment, evaluate and test SDN wireless network capabilities, and evaluate and test of mobile technologies.</p>					
<p>Title: Civil Information Management (CIM)</p> <p>Description: The CIMDPS is an automation system that assists active Civil Affairs (CA) and others engaged in civil-military operations to collect, process, analyze, maintain, mine, and deliver Civil Information and analysis products in support of military operations.</p> <p>FY 2018 Plans: Continue development and integration of Link Analysis and Mobility, and Next Generation CIMDPS Hardware platform in support of CA communities.</p> <p>FY 2019 Base Plans: Continues development and integration of Link Analysis and Mobility, and Next Generation CIMDPS Hardware platform in support of CA communities.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding was reduced by -\$0.022 million to account for the availability of prior year execution balances and minor adjustments.</p>	1.788	0.207	0.185	-	0.185
<p>Title: Special Communications (SPCOM) Enterprise program</p> <p>Description: SPCOM includes organizations, practices, processes, services, networks, systems and subsystems that manage and provide clandestine exchange of information between elements (field-to-field, field-to-base, base-to-field) for worldwide deployed SOF units, often in austere environments with heavy adversarial monitoring.</p> <p>FY 2018 Plans:</p>	4.403	4.675	4.254	-	4.254

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continue segment development for the SPCOM enterprise; develops means and methods to provide near-term impact to operators. Continue development of anti-intrusion/anti-tamper capabilities. Conduct extensive vulnerability assessments plus independent verification and validation. FY 2019 Base Plans: Continues segment development for the SPCOM enterprise; develops means and methods to provide near-term impact to operators. Continues development of anti-intrusion/anti-tamper capabilities. Continues extensive vulnerability assessments plus independent verification and validation. FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding was reduced by -\$0.421 million to account for the availability of prior year execution balances and minor adjustments.					
Accomplishments/Planned Programs Subtotals	9.037	12.864	13.966	-	13.966

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems <\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.465	304.301	282.452	295.368	Continuing	Continuing
• PROC/0204OTHER: <i>OTHER ITEMS <\$5M</i>	77.231	54.592	112.117	7.700	119.817	94.206	95.898	89.320	85.302	Continuing	Continuing

Remarks

- D. Acquisition Strategy**
- SDN is a fielded program with ETIs into all variants: heavy, medium, and light, wide-band COTM, Mobile SOF Strategic Entry Point, and Airborne Intelligence Surveillance Reconnaissance transport variants. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
 - CIM has an evolutionary acquisition strategy to enhance its capability to meet the CA communities emerging requirements.
 - SPCOM is an ETI effort to provide and support multiple field mission sets. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

<u>E. Performance Metrics</u> N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S700 / Communications Equipment and Electronics Systems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Satellite Deployable Node (SDN) Development Assessment	MIPR	Various : Various	3.405	1.447	Mar 2017	2.110	Dec 2017	4.806	Dec 2018	-		4.806	Continuing	Continuing	-
Civil Information Management Data Processing System (CIMDPS) Development	PO	TBD : SOF AT&L - KS, MACDILL AFB	-	1.788	Mar 2017	0.207	Mar 2018	0.185	Mar 2019	-		0.185	0.000	2.180	-
Special Communications (SPCOM) Enterprise Capability Development	TBD	Various : Various	4.817	3.656	Mar 2017	3.845	Feb 2018	3.329	Mar 2019	-		3.329	Continuing	Continuing	-
SPCOM Technology Vulnerability Assessments	MIPR	MITRE : Bedford, MA	1.170	0.510	Dec 2016	0.530	Dec 2017	0.669	Dec 2018	-		0.669	Continuing	Continuing	-
Subtotal			9.392	7.401		6.692		8.989		-		8.989	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SDN Market Research Evaluation and Testing	MIPR	Various : Various	2.366	1.399	Mar 2017	5.872	Jan 2018	4.721	Feb 2019	-		4.721	Continuing	Continuing	-
SPCOM Independent Verification and Validation	MIPR	MITRE : Bedford, MA	0.848	0.237	Mar 2017	0.300	Dec 2017	0.256	Dec 2018	-		0.256	Continuing	Continuing	-
Subtotal			3.214	1.636		6.172		4.977		-		4.977	Continuing	Continuing	N/A

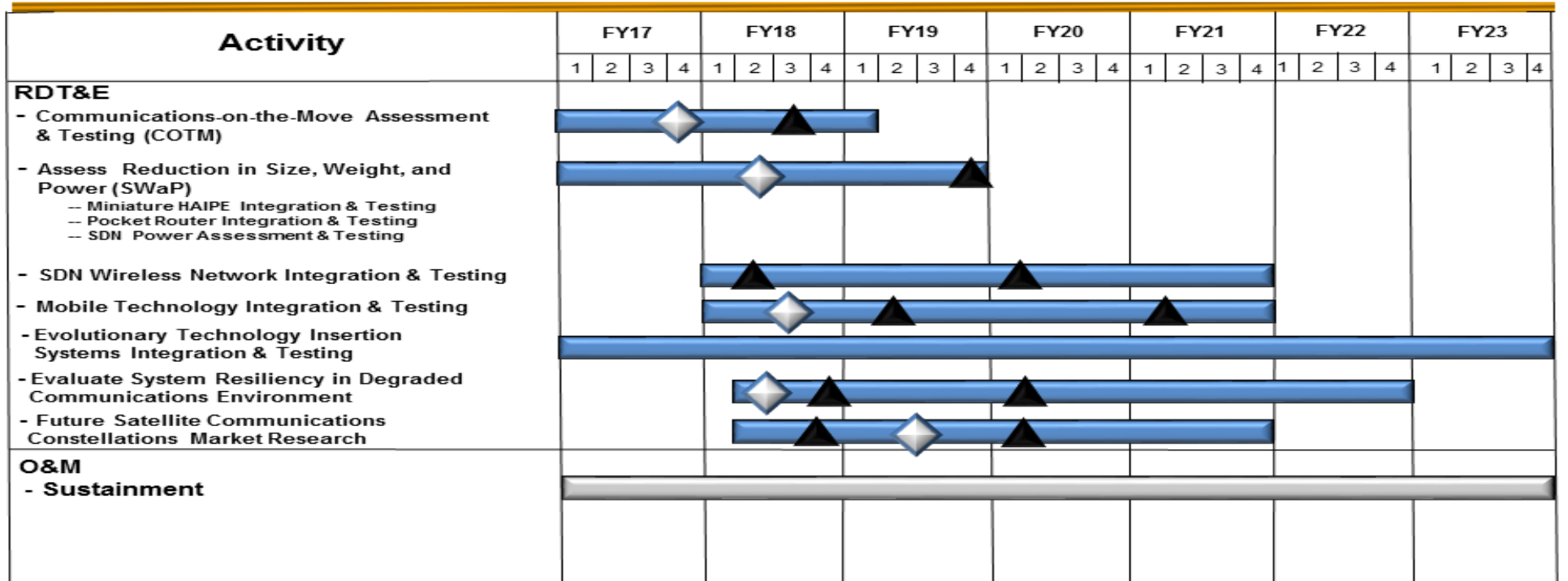
	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	12.606	9.037	12.864	13.966	-	13.966	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

SDN Schedule

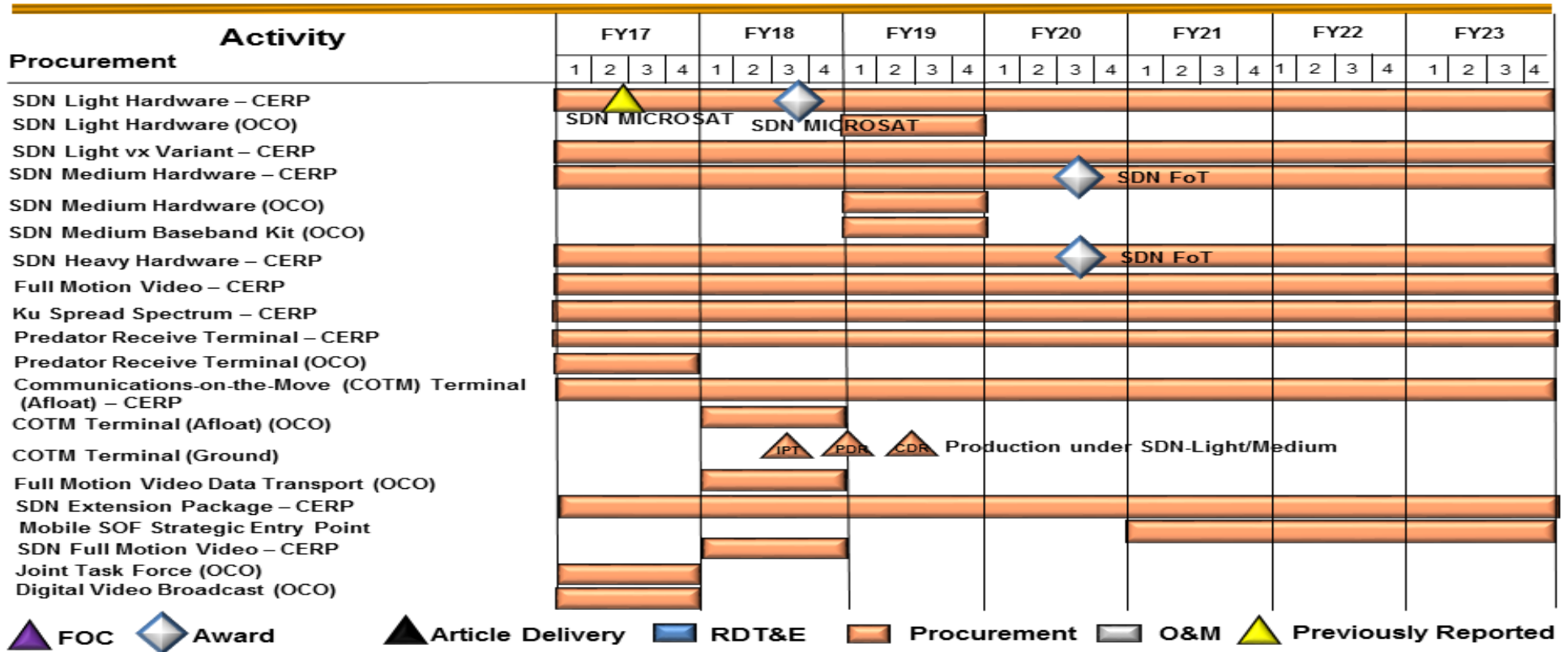


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 ◆ Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

SDN Schedule (con't)



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

Civil Information Management Data Processing System Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E																												
Link Analysis & Mobility																												
Next Gen CIMDPS Hardware Platform																					Completed and Delivered							
Procurement																												
NextGen CIMDPS with Initial Maintenance																					Completed and Delivered							
O&M																												
NextGen CIMDPS Integration, Configuration and Software Endpoint Development																												
Sustainment CIMDPS and Next Gen CIMDPS																												

FOC
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 Article Delivery
 RDT&E
 Procurement
 O&M
 Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

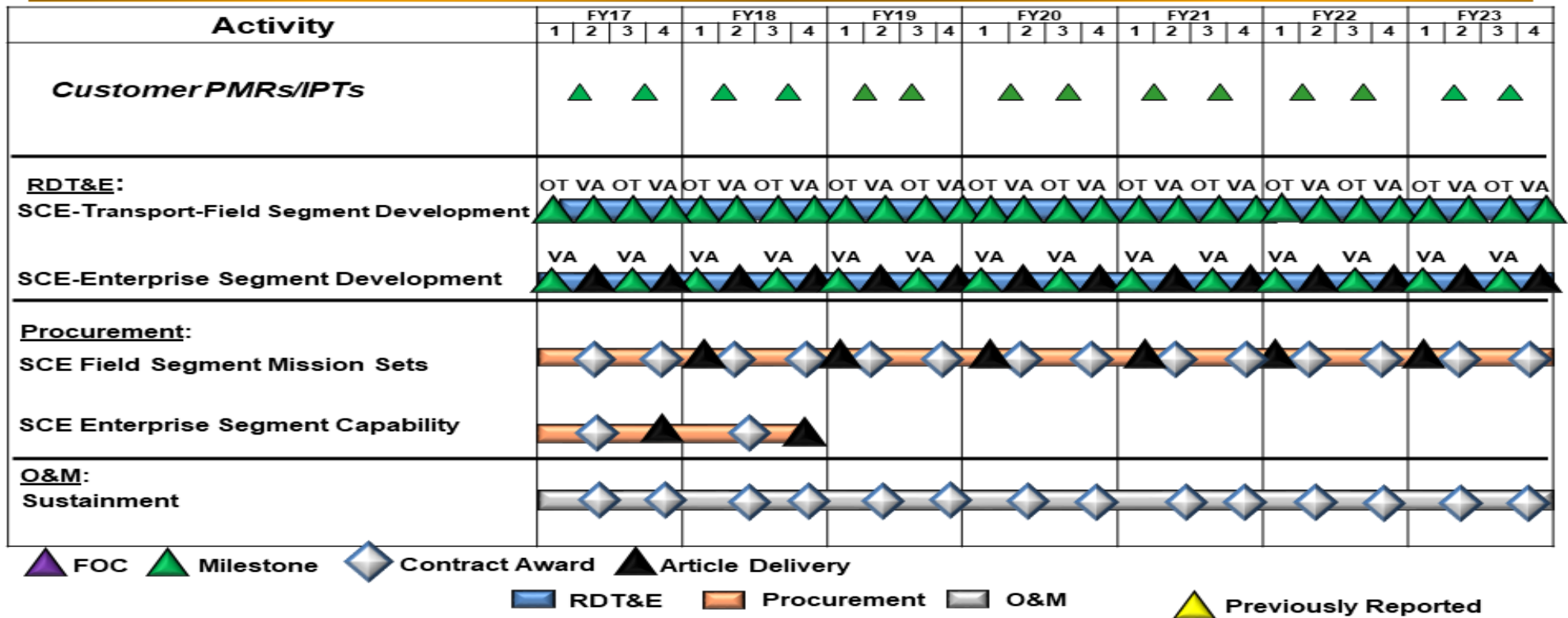
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S700 / Communications Equipment and Electronics Systems

Special Communications Enterprise Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Deployable Node (SDN)</i>				
Communications-on-the-Move (COTM) Assessment & Testing	1	2017	1	2019
Evolutionary Technology Insertion (ETI) Systems Integration & Testing	1	2017	4	2023
Evaluate System Resiliency in Degraded Communications Environment	2	2018	4	2022
Future Satellite Communications Constellations Market Research	2	2018	4	2021
<i>CIVIL INFORMATION MANAGEMENT (CIM)</i>				
Link Analysis & Mobility	2	2017	2	2019
Next Generation Civil Information Management Data Processing System (CIMDPS) Hardware Platform	2	2018	2	2019
<i>Special Communications (SPCOM) Enterprise Program</i>				
Field Segment Kit Development	1	2016	4	2023
Enterprise Segment Services Development	1	2016	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>S710: Tactical Systems Development</i>	1.812	1.083	2.416	4.240	-	4.240	3.328	3.359	3.117	3.180	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized automation equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Tactical Local Area Network (TACLAN) Suites	1.083	2.416	4.240	-	4.240
Description: TACLAN provides SOF operational commanders and forward deployed forces advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The TACLAN consists of Suites, Mission Planning Kits, Field Computing Devices, Coalition Local Area Network, and Full Motion Video Kits.					
FY 2018 Plans: Continue integration and testing of Evolutionary Technology Insertion (ETI) for Secure Data At Rest, secure wireless and cross domain solutions. Continue assessment, test and evaluation of the design and development of distributed cloud architecture to reduce complexity, improve resiliency, empower mobility, and increase security of the SIE.					
FY 2019 Base Plans: Continues integration and testing of Evolutionary Technology Insertion (ETI) for Secure Data At Rest, secure wireless and cross domain solutions. Continue assessment, test and evaluation of the design and development of distributed cloud architecture to reduce complexity, improve resiliency, empower mobility, and increase security of the SIE. Beginning integration of tactical End User Devices (EUD) and micro-server processors into mobile cloud architecture and establish multiple points of entry into the SOF Information Environment through all forms of wireless tactical transport. Beginning development of cross domain solutions on TACLAN Modular systems and integrate Software Defined Networking to the architecture to further reduce material footprint.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Begins development of Tactical Personal Area Networks (TPAN) and Wireless Personal Area Networks (WPAN). <i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Net Increase of \$1.861M provides integration and testing of wearable technologies and increase interoperability in tactical C4 platform environments. Empower user mobility through the development of TPAN and WPAN.					
Accomplishments/Planned Programs Subtotals	1.083	2.416	4.240	-	4.240

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204OTHER: OTHER ITEMS <\$5M	77.231	54.592	112.117	7.700	119.817	94.206	95.898	89.320	85.302	Continuing	Continuing

Remarks

D. Acquisition Strategy
The TACLAN evolutionary acquisition strategy includes the use of commercial and government agency sources, that will be leveraged for required certifications, functional and operational test, and acceptance support.

E. Performance Metrics
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

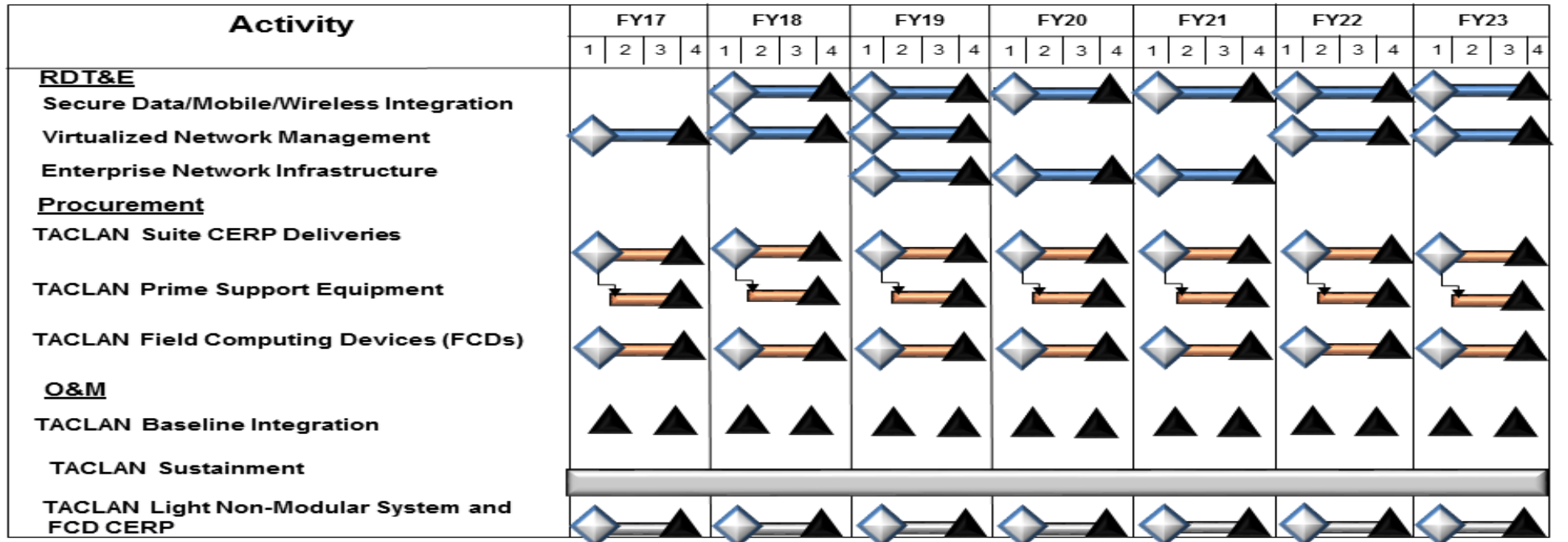
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S710 / Tactical Systems Development

TACLAN Schedule



▲ FOC
 ◆ Award
 ▲ Article Delivery
 ▬ RDT&E
 ▬ Procurement
 ▬ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Tactical Local Area Network (TACLAN) Suites</i>				
Secure Data Mobile Wireless Intergration	2	2017	4	2023
Virtualized Network Management	2	2017	4	2023
Enterprise Network Infrastructure	2	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S725 / <i>Tactical Radio Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>S725: Tactical Radio Systems</i>	9.684	3.620	13.183	4.660	-	4.660	10.691	7.286	1.871	1.909	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is for the development of all SOF tactical radio programs. Tactical Radios provide the critical Command, Control, Communications (C3) link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied foreign forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed Command and Control (C2) communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SOF Tactical Communications (STC)	3.551	13.112	4.589	-	4.589
<p>Description: STC consists of the next-generation SOF Communication System and replaces most of the currently fielded SOF suite of tactical radios. Capabilities include real time, Hostile and Friendly Force information; Line of Sight (LOS) and Beyond LOS (BLOS) Communications; and access to Situational Awareness in the form of Intelligence inputs, broadcasts, and networks.</p> <p>FY 2018 Plans: Continue development, integration and testing of new capabilities in tactical radio equipment. Enable modernization and testing of Cryptography and Global Positioning System (GPS) technology in accordance with DOD modernization directives for a fleet of more than 33,000 tactical radios. Enable integration and testing of emerging High Frequency (HF) waveform, the Mobile User Objective Waveform, emerging Mobile Ad-hoc Networking (MANET) waveforms, and the Link-16 Tactical Data Link (TDL) waveform.</p> <p>FY 2019 Base Plans: Continues development, integration and testing of new capabilities in tactical radio equipment. Enables modernization and testing of Cryptography and GPS technology in accordance with DOD modernization directives for a fleet of more than 33,000 tactical radios. Enables integration and testing of emerging HF waveform, the Mobile User Objective Waveform, emerging MANET waveforms, and the Link-16 TDL waveform.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S725 / Tactical Radio Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Net decrease of \$8.482 million is due to a -\$0.250 million decrease to re-phase effort into FY 2019 for prior year under-execution and a decrease of -\$8.232 million for higher command priorities.					
Title: Blue Force Tracking (BFT)	0.069	0.071	0.071	-	0.071
Description: BFT is a family of devices used to remotely track and monitor Blue forces. The capability enhances C2, threat warning, force protection, situational awareness, combat search and rescue, counter-fratricide, and battlefield visualization. This capability is unique to SOF because it requires the devices to be lightweight, portable, secure and a Low Probability of Intercept/Low Probability of Detection.					
FY 2018 Plans: Continue development and test of new capabilities in BFT equipment.					
FY 2019 Base Plans: Continues development and test of new capabilities in BFT equipment.					
FY 2018 to FY 2019 Increase/Decrease Statement: None.					
Accomplishments/Planned Programs Subtotals	3.620	13.183	4.660	-	4.660

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	266.704	272.285	438.590	21.135	459.725	293.645	304.301	282.452	295.368	Continuing	Continuing

Remarks

D. Acquisition Strategy

- STC is a Commercial-Off-The-Shelf/Non-Development Item program with evolutionary technology insertions (ETIs). Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- BFT is a fielded program with ETIs leveraging commercial and other government agency sources for required certifications, functional and operational tests, and technology updates.

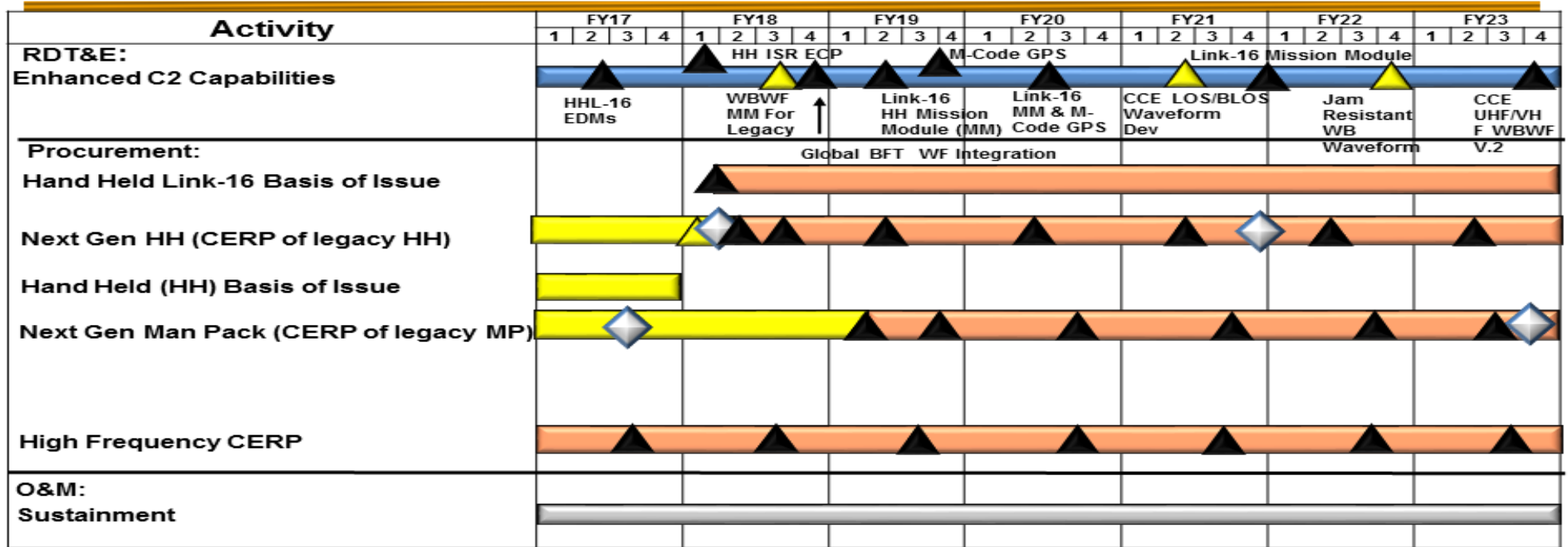
E. Performance Metrics
N/A.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S725 / Tactical Radio Systems
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STC Schedule



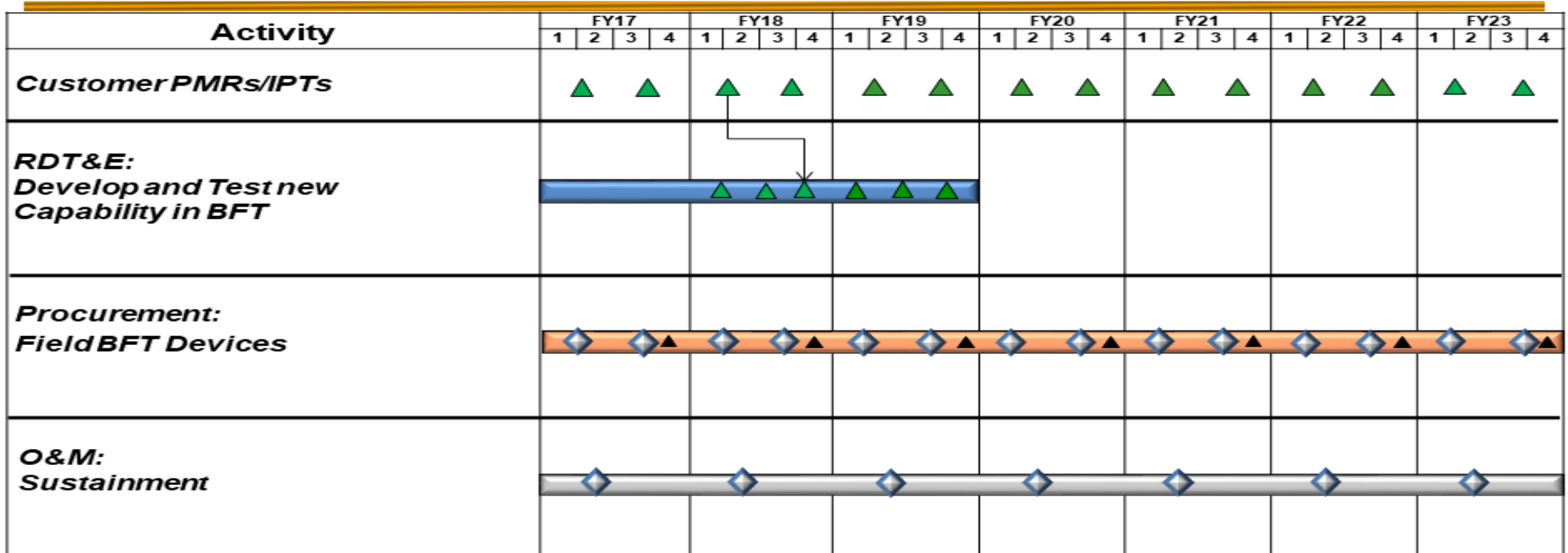
▲ FOC
 ◆ Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S725 / Tactical Radio Systems
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BFT Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S725 / <i>Tactical Radio Systems</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Tactical Communications Radio</i>				
Development	1	2017	4	2023
Test and Evaluation	1	2017	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S800: <i>Munitions Advanced Development</i>	15.052	29.614	5.491	8.730	8.040	16.770	20.791	4.882	4.855	12.866	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds advanced engineering, operational system development and qualification efforts related to specialized munitions and equipment to meet the unique requirements of SOF.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Munitions Advanced Development	0.504	0.531	0.436	-	0.436
<p>Description: The Munitions Advanced Development program provides for Insensitive Munitions (IM) technology development and evaluations that allow SOF munitions to pass testing which includes bullet impact, sympathetic detonation, fast cook off, slow cook off and shaped charge test. Testing is in accordance with the United States Special Operations IM Testing Plan. Munitions product improvements are tested in accordance with command priorities.</p> <p>FY 2018 Plans: Continue proof of concept development and IM testing on various munitions. Continue full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).</p> <p>FY 2019 Base Plans: Continues proof of concept development and IM testing on various munitions. Continues full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$ 0.095 million is due to minor adjustments.</p>					
Title: Stand-Off Precision Guided Munitions (SOPGM)	11.738	2.460	0.694	8.040	8.734
<p>Description: SOPGM provides for the integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms. This project received a congressional add in FY 2017.</p> <p>FY 2018 Plans:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Continue integration and testing of precision guided munitions on SOF platforms.</p> <p>FY 2019 Base Plans: Continues integration and testing of precision guided munitions on SOF platforms.</p> <p>FY 2019 OCO Plans: Begin integration of low-drag, lightweight, multi-capacity precision weapons stores for SOF platforms.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Net increase of \$6.274 million due to a decrease of -\$1.766 million due to planned completion of Small Diameter Bomb (SDB) II development and increase of \$8.040 million for integration and test of multi-capacity weapons stores.</p>					
<p>Title: Maritime Precision Engagement (MPE)</p> <p>Description: Guided Rocket Systems provides for the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.</p> <p>FY 2019 Base Plans: Initiates the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$2.305 million initiates the engineering, integration and testing of service-common and recently developed precision guided munitions on SOF-unique platforms.</p>	-	-	2.500	-	2.500
<p>Title: Aircraft Survivability Equipment (ASE)</p> <p>Description: The ASE program includes development of new systems, pre-planned product improvements/ upgrades of fielded survivability equipment, and continues development of flare countermeasures.</p> <p>FY 2018 Plans: Begin development of flare countermeasures to increase effectiveness against evolving threats.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$2.500 million is due to completion of flare countermeasures development.</p>	-	2.500	-	-	-
<p>Title: Counter Unmanned Aerial System (C-UAS)</p>	-	-	5.100	-	5.100

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Description: C-UAS is a complex mission, requiring a layered architecture of technical solutions to protect the Operator. These solutions are a mix of USSOCOM provided SOF unique equipment as well as Service developed capabilities.</p> <p>FY 2019 Base Plans: This funding will support the development, procurement and evaluation of High Velocity 40mm High Explosive Air Bursting Ammunition to be used with grenade machine guns. Improving the air-Bursting capability of this currently fielded weapon system will expeditiously provide kinetic Counter-Unmanned Aerial System (C-UAS) capabilities to the Warfighter.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$5.100 million supports 40mm Low Collateral Damage (LCS) air-burst munition for use with MK-47 automatic grenade launcher to provide Kinetic Counter-Unmanned Aerial System (C-UAS).</p>					
Accomplishments/Planned Programs Subtotals	12.242	5.491	8.730	8.040	16.770

	FY 2017	FY 2018
<p>Congressional Add: SOPGM</p> <p>FY 2017 Accomplishments: Continued integration of Small Glide Munition on SOF platforms while expanding capabilities of weapon for operational needs</p>	11.563	-
<p>Congressional Add: LMAMS</p> <p>FY 2017 Accomplishments: Provides test and integration of aerial munitions onto a SOF-unique platform.</p>	5.809	-
Congressional Adds Subtotals	17.372	-

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0203ORDN: <i>Ordnance Items <\$5M</i>	156.537	174.974	357.742	100.850	458.592	258.504	169.022	170.510	178.890	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command	Date: February 2018
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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D. Acquisition Strategy

Munitions Advanced Development: Munitions and packaging redesign shall take place within government laboratories, as well as in industry, depending on the munitions. IM solutions shall be tested on a small scale for proof of principle. Planned product improvements are tested at Army, Navy, and Air Force test centers.

SOPGM: Integration and developmental testing of precision guided munitions will be conducted using government laboratories or industry partners depending on the munitions for various SOF platforms.

MPE: Integration and developmental testing of the launcher systems with follow-on government-led integration effort leveraging lessons learned from similar rapid integration efforts on other combat tested SOF platforms.

ASE: Development of new systems, pre-planned product improvements/upgrades of fielded survivability equipment, and continue development of flare countermeasures.

C-UAS: Development of evolving Electronic Countermeasures (ECM) capability to Counter Unmanned Aerial Systems (C-UAS) emerging threats.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MQ-9 LSDB/SDB II Weapon Mount Hardware Development	SS/ Various	General Atomics : NY	-	2.183	Sep 2017	0.974	Jan 2018	-		-		-	0.000	3.157	-
MQ-9 LSDB/SDB II Weapon Mount Software Development	SS/ Various	Boeing : MO	-	3.655	Aug 2017	-		-		-		-	0.000	3.655	-
MQ-9 LSDB Software Update	SS/ Various	Boeing : MO	-	0.300	Nov 2017	1.486	Jan 2018	-		-		-	0.000	1.786	-
MQ-9 LSDB/SDB II Universal Armament Interface Software Development	SS/ Various	Boeing : MO	-	4.500	Jan 2017	-		-		-		-	0.000	4.500	-
SGM Integration Congressional Plus Up	C/ Various	Dynetics : AL	10.500	6.735	Jul 2017	-		-		-		-	0.000	17.235	-
Aircraft Survivability Equipment Development	Various	Various : Various	-	-		2.500	Jan 2017	-		-		-	Continuing	Continuing	-
LMAMS Development Congressional Plus Up	C/ Various	Various : Various	-	5.809	Jul 2017	-		-		-		-	Continuing	Continuing	-
Counter Unmanned Aerial System (CUAS)	C/ Various	Various : Various	-	-		-		5.100	Feb 2018	-		5.100	Continuing	Continuing	-
SOPGM Maritime	C/ Various	Various : Various	-	-		-		2.500	Feb 2018	-		2.500	Continuing	Continuing	-
Prior Year	C/ Various	Various : Various	2.933	-		-		-		-		-	0.000	2.933	-
Subtotal			13.433	23.182		4.960		7.600		-		7.600	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
LSDB/SDB Support	C/ Various	Boeing : MO	-	1.100	Feb 2017	-		-		-		-	0.000	1.100	-
SGM Support Congressional Plus Up	C/ Various	Dynetics : AL	-	2.354	Aug 2017	-		-		-		-	0.000	2.354	-
Subtotal			-	3.454		-		-		-		-	0.000	3.454	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>

Ordnance Items < \$5M Schedule

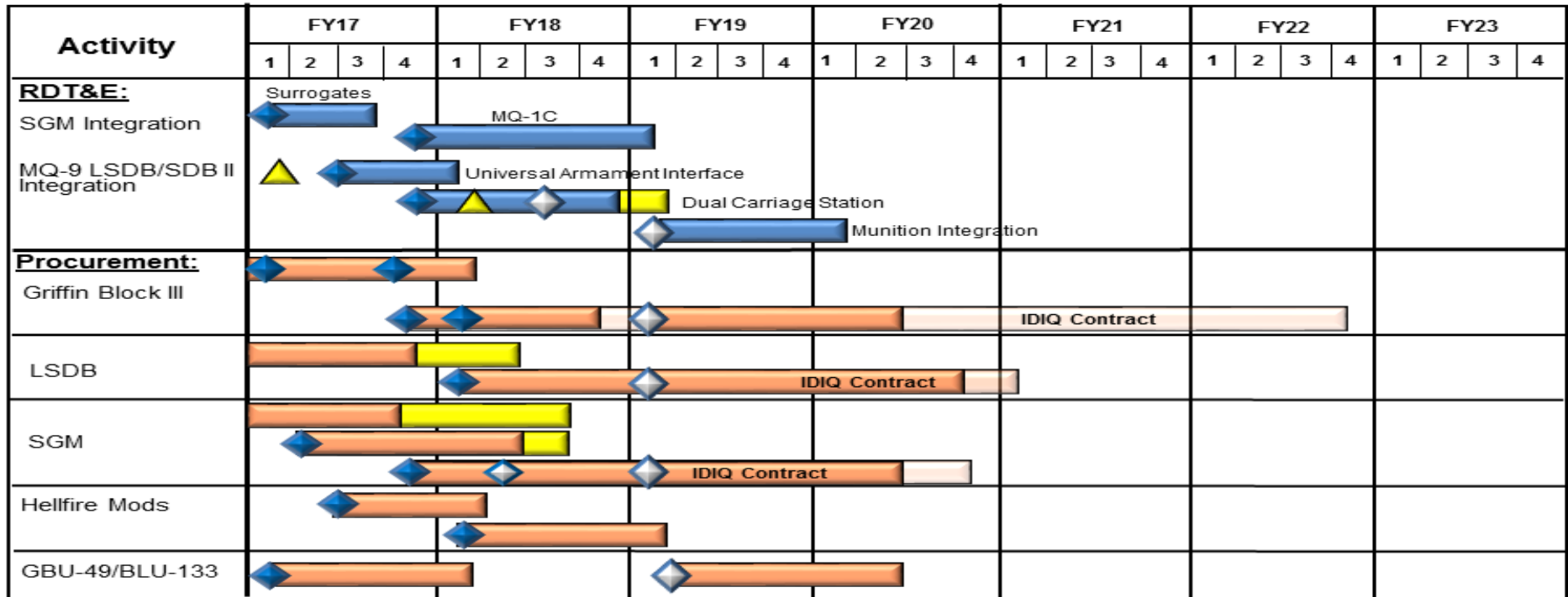
Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
RDT&E																																
AMMO System Development (Small Caliber Bullets, Air Delivered, Demolition Breaching and Pyrotechnics, Shoulder Fired Munitions, Rockets and Guided Rockets)	□				□ △ CDD Family of LW SLM				□ △ CDD				□				□				□				□							
AMMO Systems Testing	△ Report				△ Report				△ Report				△ Report				△ Report				△ Report				△ Report							
Procurement																																
AMMO, (AIR DELIVERED MUNITIONS)	◇ DO F&DR				◇ DO				◇ DO				◇ DO				◇ DO				◇ DO				◇ DO							
AMMO, (SMALL CALIBER BULLETS)	◇ Contract Awd 30mm				◇ DO F&DR				◇ Contract Awd RT Ammo				◇ DO F&DR				◇ Contract Awd ASR Ammo				◇ DO F&DR				◇ DO				◇ DO			
AMMO, (DEMOLITION, BREACHING, PYROTECHNICS, FLARES)	◇ DO				◇ DO				◇ DO				△ Contract Awd Demo				◇ DO F&DR				◇ DO				◇ DO							
AMMO, (SHOULDER FIRED MUNITIONS, ROCKETS and GUIDED ROCKETS)	◇ DO				◇ DO				△ Contract Awd MP2				◇ DO				◇ DO				◇ DO				◇ DO							
O&M																																
AMMO Program Sustainment (Air Delivered, Small Caliber, Demo, Shoulder Fired)	□																															

◇ Production Award □ RDT&E Award △ Major Event □ Previously Reported □ RDT&E □ Procurement □ O&M

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>

SOPGM Schedule



◆ Contract Award
▲ Article Delivery
← RDT&E
▬ Procurement
▬ O&M
▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SGM Integration</i>				
Classified Surrogate Aircraft Integration/Test	1	2017	3	2017
MQ-1C Integration/Test	4	2017	1	2019
<i>SDB II Integration</i>				
Universal Armament Interface Development	3	2017	1	2018
Dual-Carrage Station Development	4	2017	1	2019
Integration and Test	1	2018	1	2020

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160432BB / <i>Special Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	27.196	2.267	1.978	2.479	-	2.479	2.478	0.000	0.000	0.000	Continuing	Continuing
S500E: <i>Special Programs</i>	27.196	2.267	1.978	2.479	-	2.479	2.478	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	1.949	1.978	1.678	-	1.678
Current President's Budget	2.267	1.978	2.479	-	2.479
Total Adjustments	0.318	0.000	0.801	-	0.801
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.389	-			
• SBIR/STTR Transfer	-0.071	-			
• Other	-	-	0.801	-	0.801

Change Summary Explanation

Funding:

FY2017: Net increase of \$0.318 million is due to transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs (-\$0.071 million) and a reprogramming of \$0.389 million with details available under separate cover.

FY18: None.

FY2019: Net increase of \$0.801 million is due to a \$0.021 million decrease Department economic assumption decrease and an \$0.822 million increase available under separate cover.

Schedule: None.

Technical: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	19.110	34.766	27.270	11.700	38.970	30.549	30.207	29.274	71.165	Continuing	Continuing
S855: <i>Unmanned ISR</i>	0.000	19.110	34.766	27.270	11.700	38.970	30.549	30.207	29.274	71.165	Continuing	Continuing

A. Mission Description and Budget Item Justification

NOTE: Unmanned Intelligence, Surveillance, and Reconnaissance (ISR) includes the consolidation of Special Applications for Contingencies (previously Program Element (PE) 0304210BB); MQ-1 Unmanned Aerial Vehicle (UAV), (previously PE 0305219BB); MQ-8, (previously PE 0305231BB); RQ-11, UAV (previously PE 1105232BB); and RQ-7 UAV, (previously PE 1105233BB).

This program element is part of the Military Intelligence Program (MIP). Unmanned ISR develops and deploys special capabilities to perform Intelligence, Surveillance, and Reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means. USSOCOM has been designated as the DOD lead for planning, synchronizing, and as directed, executing global operations against terrorist networks and targets. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value fixed and fleeting targets at the unit and team level without placing personnel and units in harm's way. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This PE addresses the primary areas of ISR and Targeting capabilities for SOF.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	22.117	34.766	28.060	-	28.060
Current President's Budget	19.110	34.766	27.270	11.700	38.970
Total Adjustments	-3.007	0.000	-0.790	11.700	10.910
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.007	-			
• SBIR/STTR Transfer	-	-			
• Other	-	-	-0.790	11.700	10.910

Change Summary Explanation

Funding:

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160434BB / Unmanned ISR

FY 2017: Net decrease of -\$3.007 million due to the reprogramming increase of \$0.200 million for development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements and decrease of \$3.207 million reprogrammed for higher command priorities.

FY 2018: None.

FY 2019: Net decrease of \$0.790 million is an increase that continues evaluation of unique sensor technologies, persistent stare, and quick reaction systems (\$3.219 million); a decrease due to a Departmental economic assumption adjustment (-\$0.263 million); and the FY2019 funding request was reduced by -\$3.746 million to account for the availability of prior year execution balances.

FY 2019 OVERSEAS CONTINGENCY OPERATIONS. Increase of \$11.700 million is for advanced payload development; development and integration of Beyond Line of Sight wiring harnesses required to operate SOF-unique sensors, VORTEX encrypted data link capability, and Persistent Close Air Support collaborative engagement management capabilities on the SOF Gray Eagle Extended Range UAS.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR			Project (Number/Name) S855 / Unmanned ISR				
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S855: Unmanned ISR	0.000	19.110	34.766	27.270	11.700	38.970	30.549	30.207	29.274	71.165	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is part of the Military Intelligence Program (MIP). Develops and deploys special capabilities to perform intelligence, surveillance, and reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means.

Group 1, 2, 3 and 4, Unmanned Aerial Systems (UAS) developmental efforts are to identify, develop, integrate, and test SOF-unique mission kits, mission payloads, air vehicle enhancements, and modifications to ground control stations. SAFC develops and integrates UAS payloads to advance ISR capabilities that address dynamic and emergent operational needs of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. This program also provides a mechanism for SOF user combat evaluation of emerging sensor technologies.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SAFC	15.300	29.499	20.679	-	20.679
<p>Description: Provides for efforts to develop and integrate Unmanned Aerial Systems (UAS) payloads and technologies to advance ISR capabilities to address dynamic and emergent operational needs and vulnerabilities of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. It also provides a mechanism for SOF user combat evaluation of emerging sensor technologies. SAFC applies focused Research & Development (R&D) for relatively low cost solutions to provide short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to emergent problem sets.</p> <p>FY 2018 Plans: Continue development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continue to evaluate unique sensor technologies, persistent stare and quick reaction systems.</p> <p>FY 2019 Base Plans:</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
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Continues development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continues evaluation of unique sensor technologies, persistent stare and quick reaction systems.					
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<p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$8.820 million is due to completion of development for a classified program.</p>					
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<p>Title: Group 1 UAS</p>	0.124	0.355	0.329	-	0.329
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<p>Description: Group 1 UAS are small tactical systems, less than 20 pounds in weight. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.</p>					
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<p>FY 2018 Plans: Continue to integrate, and test SOF-unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads.</p>					
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<p>FY 2019 Base Plans: Continues integration and testing of SOF-unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads.</p>					
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<p>FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.026 million is for minor adjustments.</p>					
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<p>Title: Group 2 UAS</p>	3.686	4.912	6.262	-	6.262
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<p>Description: Group 2 UAS are medium tactical systems, between 21 pounds and 55 pounds in weight. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.</p>					
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<p>FY 2018 Plans: Continue to integrate, and test SOF-unique mission capabilities to the medium tactical UAS, to include but not limited to: signals intelligence gathering, full motion video, and geo-location.</p>					
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<p>FY 2019 Base Plans:</p>					
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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
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Continues integration and testing of SOF-unique mission capabilities to the medium tactical UAS, to include but not limited to: signals intelligence gathering, full motion video, and geo-location.					
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FY 2018 to FY 2019 Increase/Decrease Statement:
Increase of \$1.350 million is for additional integration efforts for new generation platform.

Title: Group 3 UAS	-	-	0.000	5.000	5.000
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Description: Group 3 UAS are systems, between 55 pounds and 1320 pounds in weight. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.

FY 2019 Base Plans:
None.

FY 2019 OCO Plans:
Develops various advanced payloads to support ISR payload requirements in support of SOF missions to include counterterrorism execution order missions. Current Service payloads are insufficient for precision application of SOF mission sets.

FY 2018 to FY 2019 Increase/Decrease Statement:
Increase of \$5.000 million is to develop various advanced payloads to support ISR payload requirements.

Title: Group 4 UAS	-	-	0.000	6.700	6.700
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Description: Group 4 UAS are large systems that weigh greater than 1,320 pounds and fly higher than flight level 180. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.

FY 2019 Base Plans:
None.

FY 2019 OCO Plans:
Develop and integrate Beyond Line of Sight (BLOS) wiring harnesses required to operate SOF-unique sensors, VORTEX encrypted data link capability, and Persistent Close Air Support (PCAS) collaborative engagement management capabilities on the SOF Gray Eagle Extended Range UAS.

FY 2018 to FY 2019 Increase/Decrease Statement:

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command			Date: February 2018		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>			

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Increase of \$6.700 million is for development and integration of BLOS wiring harnesses required to operate SOF-unique sensors, VORTEX encrypted data link capability, and PCAS collaborative engagement management capabilities on the SOF Gray Eagle Extended Range UAS.					
Accomplishments/Planned Programs Subtotals	19.110	34.766	27.270	11.700	38.970

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/0201UMNISR: <i>Unmanned ISR</i>	97.750	52.228	57.708	17.000	74.708	7.099	11.896	11.171	11.395	Continuing	Continuing

Remarks

D. Acquisition Strategy

SAFC acquisition strategy is evolutionary and spiral-based for technology insertion and low volume procurement. Utilizes existing competed contract vehicles to the maximum extent possible for minor development and integration and modification of Government-Off-The-Shelf/Commercial-Off-The-Shelf equipment. It utilizes limited/full and open competition contracts for major developments.

The Group 1 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the Original Equipment Manufacturer (OEM).

Group 2 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the OEM.

Group 3 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the OEM. Group 4 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contract types include a mix of cost type and fixed priced. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary issues with aircraft and Electro-Optical/Infrared (EO/IR) sensor Operational Flight Program (OFP) software and aircraft modification considerations dictate sole source contracts.

Group 4 UAS leverages service common Contractor Logistics Support (CLS) contracts for aircraft and ancillary equipment sustainment.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 7	PE 1160434BB / <i>Unmanned ISR</i>	S855 / <i>Unmanned ISR</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SAFC Platform/Payload Development and Integration	MIPR	Various : Various	-	7.161	Mar 2017	8.299	Mar 2018	11.141	Mar 2019	-		11.141	Continuing	Continuing	-
SAFC Platform/Payload Development and Integration	MIPR	SRT SATCOMM : Various	-	-		1.391	Jan 2018	-		-		-	0.000	1.391	-
SAFC Platform/Payload Development and Integration	MIPR	SRT Hardware Tracker : Various	-	-		1.100	Apr 2018	-		-		-	0.000	1.100	-
Classified Program	MIPR	Classified : Classified	-	2.382		3.000		-		-		-	Continuing	Continuing	-
Group 1 Unmanned Aerial System (UAS) Payload Integration	C/IDIQ	Various : Various	-	0.124	Mar 2017	0.355	Mar 2018	0.329	Mar 2019	-		0.329	Continuing	Continuing	-
Group 2 UAS Platform/Payloads Development	C/TBD	Various : Various	-	1.627	Mar 2017	2.456	Mar 2018	2.632	Mar 2019	-		2.632	Continuing	Continuing	-
Group 3 UAS Payload Integration	C/TBD	Various : Various	-	-		-		0.000		5.000	Mar 2019	5.000	Continuing	Continuing	-
Group 4 UAS Platform/Payloads Development and Integration	C/TBD	Various : Various	-	-		-		0.000		6.700	Nov 2018	6.700	Continuing	Continuing	-
Subtotal			-	11.294		16.601		14.102		11.700		25.802	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SAFC Platform/Payload Integration	MIPR	Various : Various	-	0.600	Jan 2017	0.682	Jan 2018	0.527	Jan 2019	-		0.527	-	-	-
Group 2 UAS Platform/Payload Support	C/TBD	Various : Various	-	0.617	Mar 2017	0.736	Mar 2018	1.088	Mar 2019	-		1.088	-	-	-
Subtotal			-	1.217		1.418		1.615		-		1.615	-	-	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SAFC Sensor Testing, Evaluation and Demonstration	MIPR	Various : Various	-	4.084	Mar 2017	12.978	Mar 2018	7.428	Mar 2019	-		7.428	-	-	-
Group 2 UAS Platform/ Payload Test and Evaluation	C/TBD	Various : Various	-	0.825	Mar 2017	0.984	Mar 2018	1.454	Mar 2019	-		1.454	-	-	-
Subtotal			-	4.909		13.962		8.882		-		8.882	-	-	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SAFC Sensor Testing, Evaluation and Demonstration Management	MIPR	Various : Various	-	1.073	Mar 2017	2.049	Mar 2018	1.583	Mar 2019	-		1.583	-	-	-
Group 2 UAS Platform/ Payload Management	C/TBD	Various : Various	-	0.617	Mar 2017	0.736	Mar 2018	1.088	Mar 2019	-		1.088	-	-	-
Subtotal			-	1.690		2.785		2.671		-		2.671	-	-	N/A

Project Cost Totals	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
	-	19.110	34.766	27.270	11.700	38.970	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

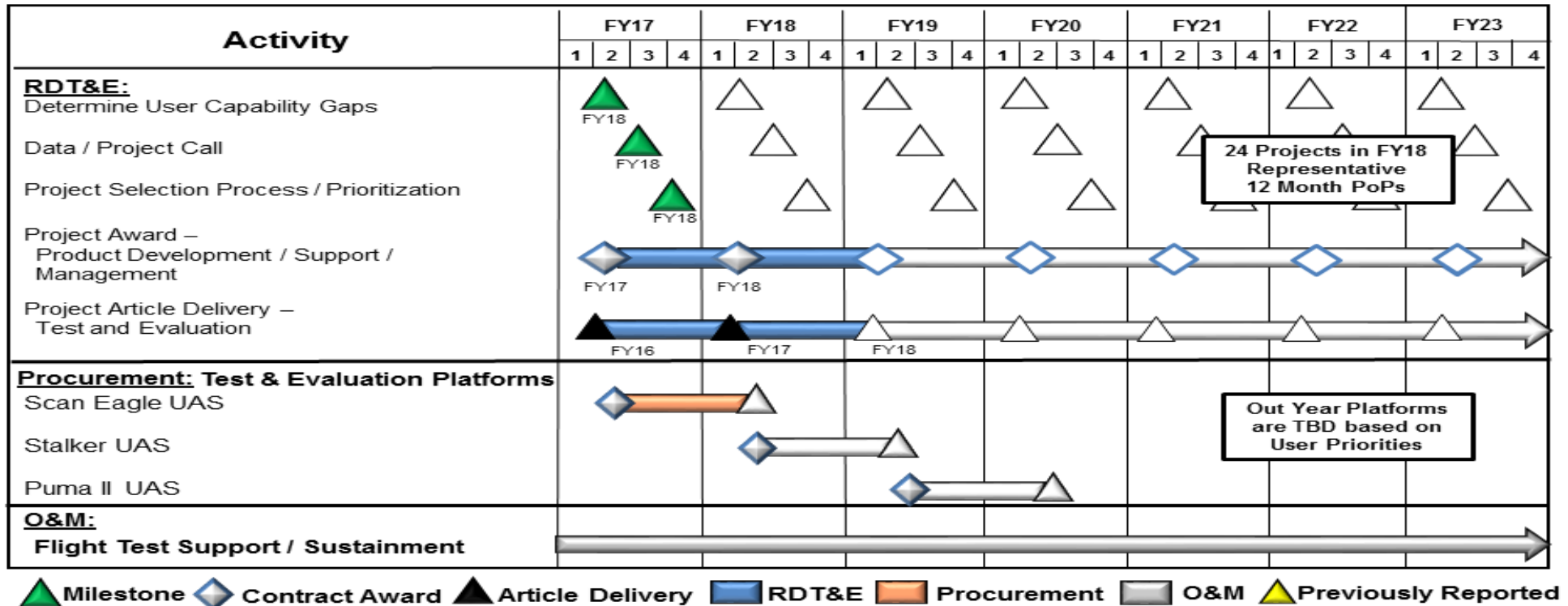
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160434BB / Unmanned ISR

Project (Number/Name)
S855 / Unmanned ISR

SAFC Schedule

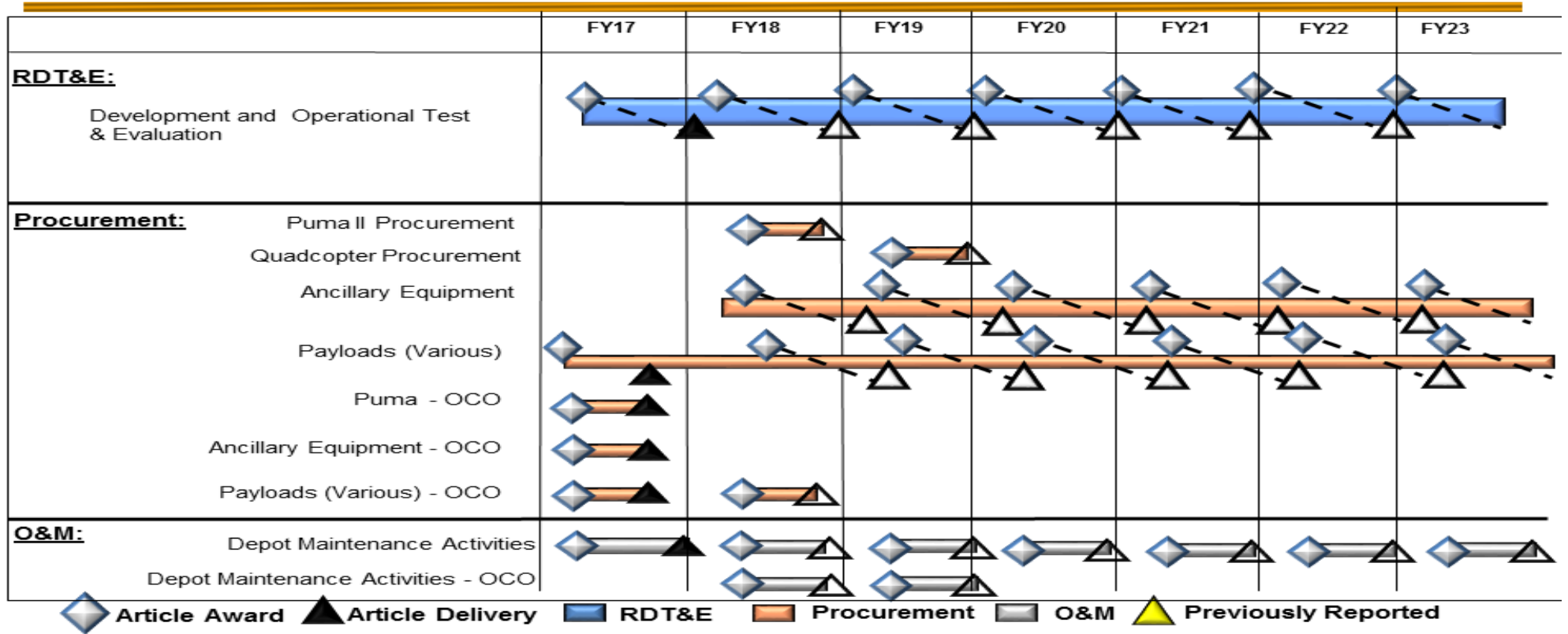


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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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Group 1 Unmanned ISR Schedule

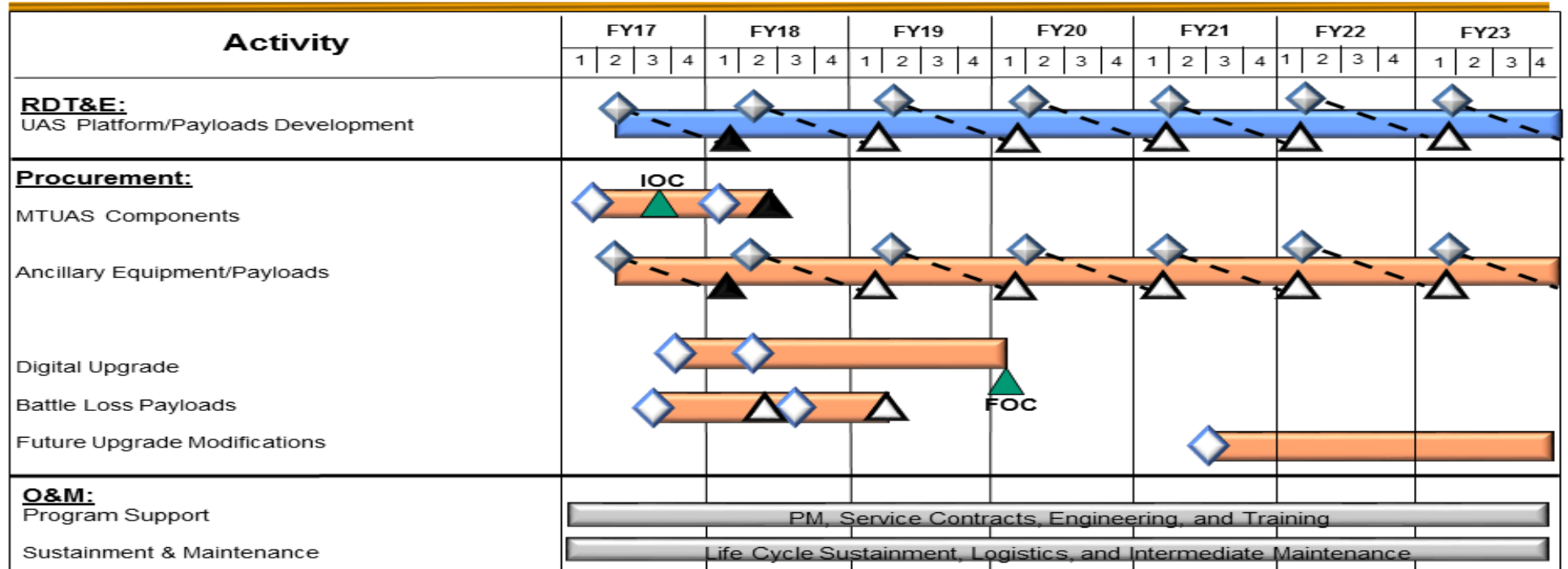


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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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Group 2 (MTUAS) Schedule





▲ Milestone
 ◆ Contract Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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Group 3 (STUAS) Schedule

Activity	FY17	FY18	FY19	FY20	FY21	FY22	FY23
<u>RDT&E:</u>							
Payload Development & Integration							
<u>Procurement:</u>							
STUAS Payloads							

IOC/FOC
 Contract Award
 Article Delivery
 RDT&E
 Procurement
 O&M
 Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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Group IV Unmanned ISR Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Fielded SOF MQ-1C Aircraft (Qty): GREEN – Fielded MQ-1C RED – Planned Fielding MQ-1C E/R	12				16 + + + +				24 + + + + + + + +				24				24				24				24			
MQ-1C Orbits	2				2				4				4				4				4				4			
RDTE: Product Development:																												
Persistent Close Air Support (PCAS) Vortex																												
Beyond Line of Sight (BLOS) Wiring Harnesses																												
Procurement: Mission Kits:																												
PCAS																												
Vortex																												
BLOS Wiring Harnesses																												
Small Glide Munition (SGM) A-Kits																												
O&M:																												

◆ Article Award
▲ Article Delivery
■ RDT&E
■ Procurement
■ O&M
▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SAFC				
Platform/Payload Development and Integration	2	2017	4	2023
Sensor Testing, Evaluation and Demonstration	2	2017	4	2023
Group 1 Unmanned Aerial System (UAS)				
Payload Integration	2	2017	4	2023
Group 2 UAS				
Operational Test/Operational Assessment (OT/OA)	2	2017	4	2023
Payload Integration	2	2017	4	2023
Group 3 UAS				
Payload Integration	2	2019	4	2023
Group 4 UAS				
Platform/Payload Development and Integration	1	2019	2	2020

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	34.524	3.211	2.578	1.121	0.725	1.846	3.551	3.305	2.782	2.838	Continuing	Continuing
S910: <i>SOF Tactical Vehicles</i>	34.524	3.211	2.578	1.121	0.725	1.846	3.551	3.305	2.782	2.838	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for the development and testing of a variety of incremental upgrades to Special Operations Forces (SOF) Vehicles and ancillary equipment. Current SOF tactical vehicles include: Lightweight Tactical All Terrain Vehicles (Light), Ground Mobility Vehicles (Medium), Non-Standard Commercial Vehicles (Commercial) for use in tactical missions, and Mine Resistant Ambush Protected Vehicles (Heavy). The SOF mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.316	2.578	2.624	-	2.624
Current President's Budget	3.211	2.578	1.121	0.725	1.846
Total Adjustments	-0.105	0.000	-1.503	0.725	-0.778
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.105	-			
• Other Adjustments	-	-	-1.503	0.725	-0.778

Change Summary Explanation

Funding:

FY 2017: Decrease of -\$0.105 million is due to the transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer programs.

FY 2018: None.

FY 2019: Net decrease of \$1.503 million is due to a Departmental economic assumption adjustment decrease of \$0.022, a reduction of \$1.481 million to account for the availability of prior year execution balances.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160480BB / <i>SOF Tactical Vehicles</i>

FY 2019 OVERSEAS CONTINGENCY OPERATIONS FUNDING: Increase of \$0.725 million provides for the design/development, integration, and testing of Remote Weapons Station (RWS) for the deployed GMV 1.1s at multiple locations.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>				Project (Number/Name) S910 / <i>SOF Tactical Vehicles</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S910: <i>SOF Tactical Vehicles</i>	34.524	3.211	2.578	1.121	0.725	1.846	3.551	3.305	2.782	2.838	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Family of Special Operations Vehicles (FSOV) project develops, tests, and evaluates SOF Tactical Vehicles and associated modifications. The Special Operations Forces (SOF) mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability. The current family of SOF tactical vehicles include: individual mobility vehicles, light mobility vehicles, medium mobility vehicles, non-standard commercial vehicles, and heavy mobility vehicles.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: FSOV	3.211	2.578	1.121	0.725	1.846
Description: Specific efforts include but are not limited to: Ground Mobility Vehicle (GMV) Medium Version 1.1 effort which provides for a medium vehicle variant capable of meeting specific requirements of internal aircraft transport on the C/MH-47, engineering costs related to performance, endurance, safety testing, integration and logistical analysis of product samples, and Engineering Change Proposal (ECPs) associated with the Non-Standard Commercial Vehicle (NSCV), the Lightweight Tactical All Terrain Vehicle (LTATV). These ECPs will address any identified safety, reliability, and performance concerns. Finally, funding will be used to support vehicle signature reduction efforts.					
FY 2018 Plans: Continue design/development and integration of ECPs that implement incremental upgrades and improve the design of the LTATV, GMV 1.1, and NSCV, to include a C4 effort to incorporate a Chairman of the Joint Chiefs of Staff directed Global Positioning Satellite (GPS) upgrade to M-Code. Continue safety, reliability, performance, and operational testing of multiple variants of NSCV from the new contract.					
FY 2019 Base Plans: Continues design/development and integration of ECPs that implement incremental upgrades and improve the design of the LTATV, GMV 1.1, and NSCV. Efforts will include next-generation cards based radio integration design and testing on the GMV 1.1 and NSCV. Completes safety, reliability, performance, and operational testing of multiple variants of NSCV from the new contract.					
FY 2019 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>	Project (Number/Name) S910 / <i>SOF Tactical Vehicles</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Provides design/development, integration, and testing of Remote Weapons Station (RWS) for the deployed GMV 1.1s at multiple locations. <i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Net decrease of \$0.732 million: Base decrease of \$1.457 million is due to a department economic assumption adjustment (decrease of \$0.022 million), a reduction to account for the availability of prior year execution balances (decrease of \$1.435 million) and additional Overseas Contingency Operations funding of \$0.725 million for the development and testing of lifecycle/durability/environmental improvements for the Non-standard Commercial Vehicle.					
Accomplishments/Planned Programs Subtotals	3.211	2.578	1.121	0.725	1.846

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204TACVEH: <i>Tactical Vehicles</i>	74.169	101.831	88.608	59.891	148.499	76.192	37.684	28.696	29.270	Continuing	Continuing

Remarks

D. Acquisition Strategy
Apply SOF-Peculiar modifications to service common or Commercial Off The Shelf (COTS) vehicles whenever possible. Otherwise, incorporate purpose-built, Non-Developmental Item, or modified COTS vehicles if/when service solution is unavailable.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles	Project (Number/Name) S910 / SOF Tactical Vehicles
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FSOV GMV 1.1 Capability Enhancements / ECP Development	Various	Various : Various	11.740	0.545	Jul 2017	0.689	Jun 2018	0.336	Feb 2019	-		0.336	Continuing	Continuing	-
FSOV NSCV Capability Enhancements / ECP Development	Various	Various : Various	0.807	0.060	Jul 2017	1.294	Jun 2018	0.335	Apr 2019	-		0.335	Continuing	Continuing	-
FSOV LTATV Capability Enhancements / ECP Development	Various	Various : Various	0.381	0.539	Aug 2017	0.595	Jun 2018	-		-		-	Continuing	Continuing	-
FSOV GMV 1.1 and NSCV Survivability Enhancement/ Improvement Efforts	Various	Various : Various	-	0.033	Jul 2017	-		0.200	Jun 2019	-		0.200	Continuing	Continuing	-
FSOV GMV 1.1 Capability Enhancements / ECP Development (OCO)	Various	Various : Various	-	-		-		0.000		0.725	Mar 2018	0.725	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	0.385	-		-		-		-		-	Continuing	Continuing	-
Subtotal			13.313	1.177		2.578		0.871		0.725		1.596	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FSOV GMV 1.1 Medium ECP Development & C4 Integration	C/FFP	General Dynamics - OTS : St. Petersburg, FL	0.925	-		-		-		-		-	Continuing	Continuing	-
FSOV LTATV ECP	C/FFP	Polaris Defense : Minneapolis, MN	0.187	-		-		-		-		-	Continuing	Continuing	-
FSOV NSCV ECP	MIPR	HQ USSOCOM : Tampa, FL	0.500	-		-		-		-		-	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	3.910	-		-		-		-		-	Continuing	Continuing	-
Subtotal			5.522	-		-		-		-		-	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>	Project (Number/Name) S910 / <i>SOF Tactical Vehicles</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FSOV GMV 1.1 Medium Initial Operational Test and Evaluation (IOT&E)	MIPR	Nevada Automotive Test Center : Carson City, NV	0.447	-		-		-		-		-	Continuing	Continuing	-
FSOV GMV 1.1 Test Support	MIPR	Nevada Automotive Test Center : Carson City, NV	0.112	-		-		-		-		-	Continuing	Continuing	-
GMV 1.1 Test and Evaluation Validation Efforts (Automotive, C4I, Ballistics, Operator Events)	Various	Various : Various	-	0.339	Apr 2017	-		0.000		-		0.000	Continuing	Continuing	-
NSCV Test and Evaluation Validation Efforts (Automotive, C4I, Ballistics, Operator Events)	Various	Various : Various	-	1.695	Nov 2016	-		0.250	Dec 2018	-		0.250	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	15.130	-		-		-		-		-	Continuing	Continuing	-
Subtotal			15.689	2.034		-		0.250		-		0.250	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	34.524	3.211	2.578	1.121	0.725	1.846	Continuing	Continuing	N/A

Remarks
*** PLEASE ADD COSTS OR ENTER REMARKS ***

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles	Project (Number/Name) S910 / SOF Tactical Vehicles
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FSOV Schedule

Activity	FY17				FY18				FY19				FY20				FY21				FY22				FY23			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E																												
Product Development (GMV 1.1, LTATV, NSCV)	[RDT&E Award Icons]																											
Test & Evaluation (GMV 1.1)	[RDT&E Award Icons]																											
	Air Drop																											
Procurement																												
GMV 1.1 (w/C4 A-Kit) Procure/Field	[FRP DO Icons]																											
NSCV (w/C4 A-Kit) Procure/Field	[LCR DO Icons]																											
	FOC																											
O&M																												
GMV 1.0 Sustainment	[O&M Icons]																											
GMV 1.1 Sustainment	[O&M Icons]																											
LTATV Procure/Field/Sustain	[LCR DO Icons]																											
NSCV Sustainment	[O&M Icons]																											
MRAP Enduring Requirement (HST/APS) (280 USASOC/WARCOM)	IROAN / Reset																											
MRAP RSM/OIR/EA Sustainment (224 TPE sustained w/OCO)	Sustained by the Services; SOF-P sustained by SOCOM																											
	Divest as Operational Environment Dictates																											

Production Award RDT&E Award Major Event Previously Reported RDT&E Procurement O&M OCO	IOT&E - Initial Operational Test & Evaluation IROAN - Inspect & Repair Only As Necessary LTATV - Light Tactical All Terrain Vehicle	LCR DO - Life Cycle Replacement Delivery Order LRIP DO - Low Rate Initial Production Delivery Order MRAP - Mine Resistant Ambush Protected	MSC - Milestone C NSCV - Non Standard Commercial Vehicle SOFP - Special Operation Force Peculiar
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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>	Project (Number/Name) S910 / <i>SOF Tactical Vehicles</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Family of Special Operations Vehicles (FSOV)</i>				
Product Development (GMV 1.1, LTATV, NSCV)	1	2017	4	2023
Test & Evaluation (GMV 1.1)	1	2017	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	350.185	52.199	42.315	42.471	-	42.471	31.865	29.982	21.197	46.307	Continuing	Continuing
S0417: <i>Underwater Systems</i>	321.000	48.317	35.114	26.897	-	26.897	22.693	21.595	17.572	42.610	Continuing	Continuing
S1684: <i>Surface Craft</i>	29.185	3.882	7.201	15.574	-	15.574	9.172	8.387	3.625	3.697	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for engineering and manufacturing development (EMD) of Special Operations Forces (SOF) Surface and Undersea Mobility platforms. This program element also provides for pre-acquisition activities to quickly respond to new requirements for SOF surface and undersea mobility, looking at multiple alternatives to include cross-platform technical solutions, service-common solutions, Commercial-Off-The-Shelf technologies, and new development efforts.

The Underwater Systems project provides for EMD of combat submersibles, SOF operator diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component and prototype development) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

The Surface Craft project provides for EMD of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement and technology insertion engineering changes to meet the unique requirements of SOF. This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	54.577	42.315	20.457	-	20.457
Current President's Budget	52.199	42.315	42.471	-	42.471
Total Adjustments	-2.378	0.000	22.014	-	22.014
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.389	-			
• SBIR/STTR Transfer	-1.989	-			
• Other	-	-	22.014	-	22.014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command Date: February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>
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Change Summary Explanation

Funding:

FY 2017: Decrease of \$2.378 million is due to the transfer of funds (-\$1.989 million) to Small Business Innovative Research/Small Business Technology Transfer programs and a reprogramming of -\$0.389 million from Surface Craft for higher Command priorities.

FY 2018: None.

FY 2019: Net increase of \$22.014 million is due to FY 2019 funding request reduction of -\$8.733 million to account for the availability of prior year execution balances, a -\$0.321 million decrease to reflect Departmental economic adjustments, an increase of \$5.810 million to conduct Developmental Testing (DT) and Initial Operational Test and Evaluation (OT&E) for Threat Awareness System, an increase of \$15.258 million to develop and integrate a Mid-Water Column lock-in/lock-out, decompression pump, signature management capabilities on Dry Combat Submersible (DCS) vessels, and conduct DT and OT&E on DCS 1 and an increase of \$10 million for Maritime Precision Engagement Production Representative Article.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S0417 / <i>Underwater Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S0417: <i>Underwater Systems</i>	321.000	48.317	35.114	26.897	-	26.897	22.693	21.595	17.572	42.610	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of combat underwater submersibles, Special Operations Forces (SOF) operator diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Shallow Water Combat Submersible (SWCS)	0.950	1.378	1.247
Description: This sub-project provides for the design, development, test, manufacturing and sustainment of one Engineering Development Model (EDM) and ten production units to replace the legacy MK 8 MOD 1 Seal Delivery Vehicle (SDV) system. SWCS is a free-flooding combat submersible mobility platform suitable for transporting and deploying SOF and their payloads for a variety of SOF missions. SWCS will be deployable from a Dry Deck Shelter (DDS), surface ships, and land. The SWCS system includes the SWCS vehicle and SWCS support Equipment, comprised of Mission Support Equipment (MSE), Pack-Up Kit (PUK), and Transportation and Handling (T&H). It also includes integration efforts with the current Dry Deck Shelter (DDS) and development of product improvements accomplished throughout the lifecycle of the system.			
FY 2018 Plans: Continue Initial Operational Test and Evaluation (IOT&E).			
FY 2019 Plans: Continues pre-planned product improvements and complete IOT&E.			
FY 2018 to FY 2019 Increase/Decrease Statement: Decrease of \$0.131 million is due to minor adjustments.			
Title: Dry Combat Submersible (DCS)	39.139	21.497	15.024
Description: This sub-project provides for the advanced development, engineering, manufacturing, and testing efforts for a surface-launched, dry, diver lock-in/lock-out vessel capable of inserting and extracting SOF and/or payloads into denied areas. USSOCOM awarded an Engineering and Manufacturing Development (EMD) contract in FY 2016 to produce one production representative vessel, with options to produce two additional vessels. USSOCOM is testing one submersible prototype to validate			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>test methodologies, commercial classification, and SOCOM safety certification processes and will continue to use the prototype to evaluate capability enhancing technologies and reduce risk in the DCS program. This project includes funding for enhanced warfighter capabilities such as Mid-Water Column Lock-In/Lock-Out, depressurization pump, and submarine interoperability.</p> <p>FY 2018 Plans: Continue to evaluate capability enhancing technologies and reduce risk in the DCS program. Continue manufacturing of DCS production representative EMD Vessel. Achieve Milestone C.</p> <p>FY 2019 Plans: Continues to evaluate capability enhancing technologies and reduce risk in the DCS program. Conduct Government Acceptance Testing and initiate developmental testing and operational testing.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was reduced by \$6.473 million to account for the availability of prior year execution balances and due to completion of Production Representative Article.</p>				
<p>Title: Dry Deck Shelter (DDS) Modernization</p> <p>Description: This sub-project provides for the pre-planned product improvements, testing, and integration of specialized underwater systems to meet the unique requirements of SOF, and compatibility with the submarine fleet. The current DDS is a certified diving system which attaches to modified host submarines that provides for insertion of SOF forces and platforms. Funding supports product improvements to the current DDS, as well as associated diver equipment for in-service submarine support systems, unmanned underwater vehicles, and follow on development efforts for future SOF payloads.</p> <p>FY 2018 Plans: Continue development of the modernization necessary to extend useful life of the DDS, transition from SSGN to Virginia Class host platform, and increase capacity to carry larger payloads.</p> <p>FY 2019 Plans: Continues development of the modernization necessary to extend useful life of the DDS, transitions from SSGN to Virginia Class host platform, and increases capacity to carry larger payloads.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was reduced by \$1.636 million to account for the availability of prior year execution balances.</p>		6.228	10.200	8.564
<p>Title: SOF Combat Diving</p> <p>Description: This sub-project provides for the development, testing, and fielding of SOF peculiar diving equipment providing the SOF combat diver the ability to engage the enemy and conduct operations. SOF Combat Diving will support the SDV, SWCS, and DCS with the conduct of infiltration/extraction, material recovery, underwater ship attack, beach clearance, and</p>		2.000	2.039	2.062

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
other missions. Technologies include, but are not limited to, commercial and developmental life support, maneuverability, diver navigational accuracy and situational awareness, thermal protection, and underwater communications.			
FY 2018 Plans: Continue development for environmental protection, navigation, communication, and propulsion.			
FY 2019 Plans: Continues development, to include test and evaluation for environmental protection, navigation, communication, and propulsion.			
FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.023 million due to minor adjustments.			
Accomplishments/Planned Programs Subtotals	48.317	35.114	26.897

C. Other Program Funding Summary (\$ in Millions)												
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2019</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	
• PROC/0210US: <i>Underwater Systems</i>	42.840	92.606	136.723	Base	OCO	Total	75.126	40.817	24.017	22.609	Continuing	Continuing

Remarks

D. Acquisition Strategy

- SWCS used full and open competition with a down select to a single contractor. The full spectrum of contracting activities are being utilized for any integration and subsystem requirements, using existing contracts where appropriate, government agencies, and new contracts as necessary.
- DCS used full and open competition, resulting in the selection of a single prime contractor. A Fixed Price Incentive Firm Target contract for a production representative system was awarded in FY 2016 with options to procure one vessel in FY 2018 and one in FY 2019.
- The DDS is currently in sustainment through a series of maintenance and service contracts which were competitively sourced, and awarded for a 5-year period. The modernization and engineering/change efforts for the six DDS in inventory are executed utilizing existing services contracts.
- SOF Combat Diving efforts are executed using existing contracts, government agencies, and new contracts competitively selected as appropriate.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCS Technologies Government Furnished Equipment	C/Various	Various : Various	30.292	7.461	Mar 2017	3.000	Mar 2018	3.118	Mar 2019	-		3.118	Continuing	Continuing	-
DCS Engineering & Manufacturing Development	C/FPIF	Lockheed Martin : Riviera Beach, FL	26.846	26.015	Mar 2017	12.997	Mar 2018	-		-		-	0.000	65.858	-
DCS Engineering Changes	C/Various	Various : Various	0.000	3.135	Mar 2017	1.571	Mar 2018	2.087	Mar 2019	-		2.087	Continuing	Continuing	-
Dry Deck Shelter (DDS) Modernization	SS/CPFF	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	8.543	6.006	Jan 2017	9.850	Jan 2018	8.242	Jan 2019	-		8.242	Continuing	Continuing	-
SOF-Unique Diving Technologies	Various	Various : Various	0.370	1.500	Nov 2016	1.369	Nov 2017	1.379	Nov 2018	-		1.379	Continuing	Continuing	-
SWCS Engineering Changes	C/Various	Various : Various	-	-		-		1.047	Feb 2019	-		1.047	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	202.681	-		-		-		-		-	0.000	202.681	-
Subtotal			268.732	44.117		28.787		15.873		-		15.873	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Funding	Various	Various : Various	9.094	-		-		-		-		-	0.000	9.094	-
Subtotal			9.094	-		-		-		-		-	0.000	9.094	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SWCS	Various	Puget Sound Naval Shipyard : Seattle, Washington	1.214	0.600	Nov 2016	1.378	Nov 2017	0.200	Nov 2018	-		0.200	0.000	3.392	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCS	C/Various	NAVSEA / CRANE : Crane, IN	10.306	-		1.525	Jun 2018	7.448	Mar 2019	-		7.448	0.000	19.279	-
SOF Combat Diving	Various	Various : Various	0.130	0.500	Jun 2017	0.500	Jun 2018	0.510	Mar 2019	-		0.510	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	9.320	-		-		-		-		-	0.000	9.320	-
Subtotal			20.970	1.100		3.403		8.158		-		8.158	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SWCS	Various	Penn State University : University Park, PA	2.781	0.350	Jun 2017	-		-		-		-	0.000	3.131	-
DCS	Various	Booz Allen Hamilton : Tampa, FL	12.116	2.528	Jun 2017	2.404	Jun 2018	2.371	Mar 2019	-		2.371	Continuing	Continuing	-
DDS	MIPR	NAVSEA : Washington, DC	1.107	0.222	Jan 2017	0.350	Jan 2018	0.322	Jan 2019	-		0.322	Continuing	Continuing	-
SOF Combat Diving	C/Various	Booz Allen Hamilton : Tampa, FL	-	-		0.170	Dec 2017	0.173	Dec 2018	-		0.173	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	6.200	-		-		-		-		-	0.000	6.200	-
Subtotal			22.204	3.100		2.924		2.866		-		2.866	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		321.000	48.317	35.114	26.897	-	26.897	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

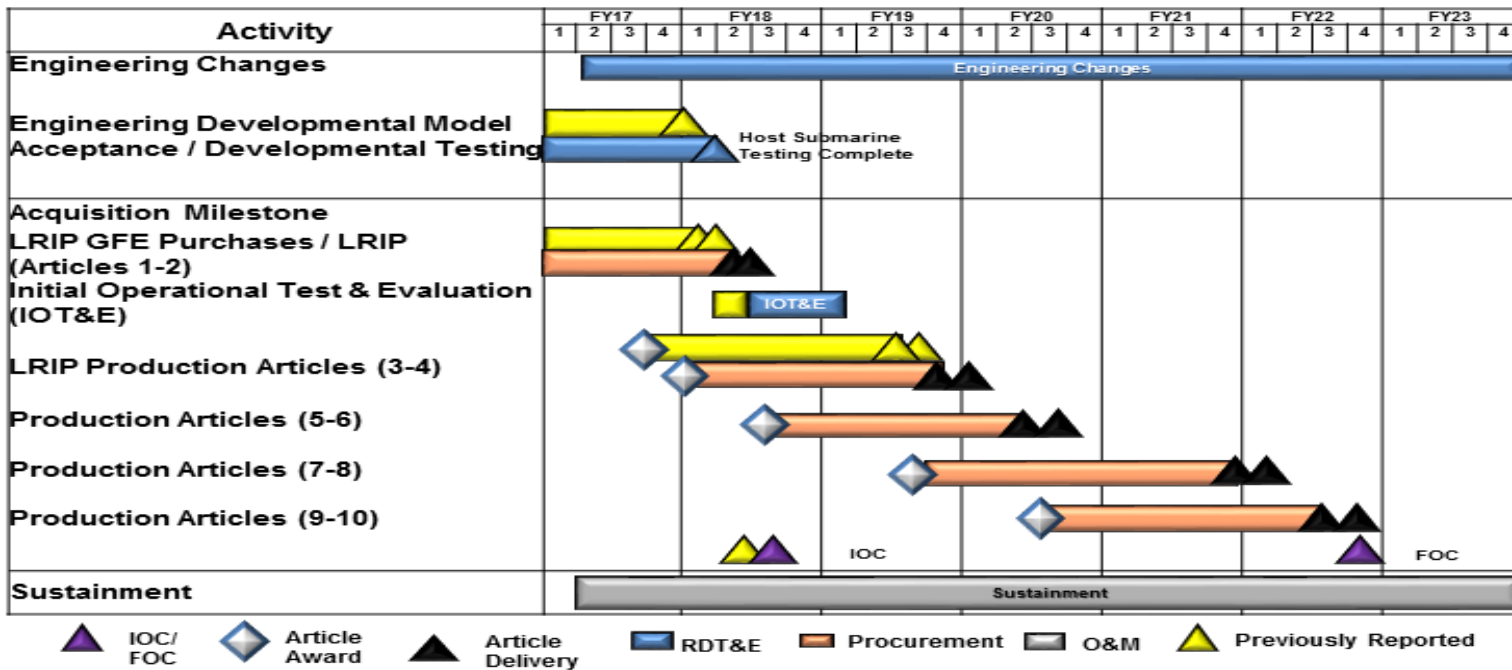
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

Shallow Water Combat Submersible Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

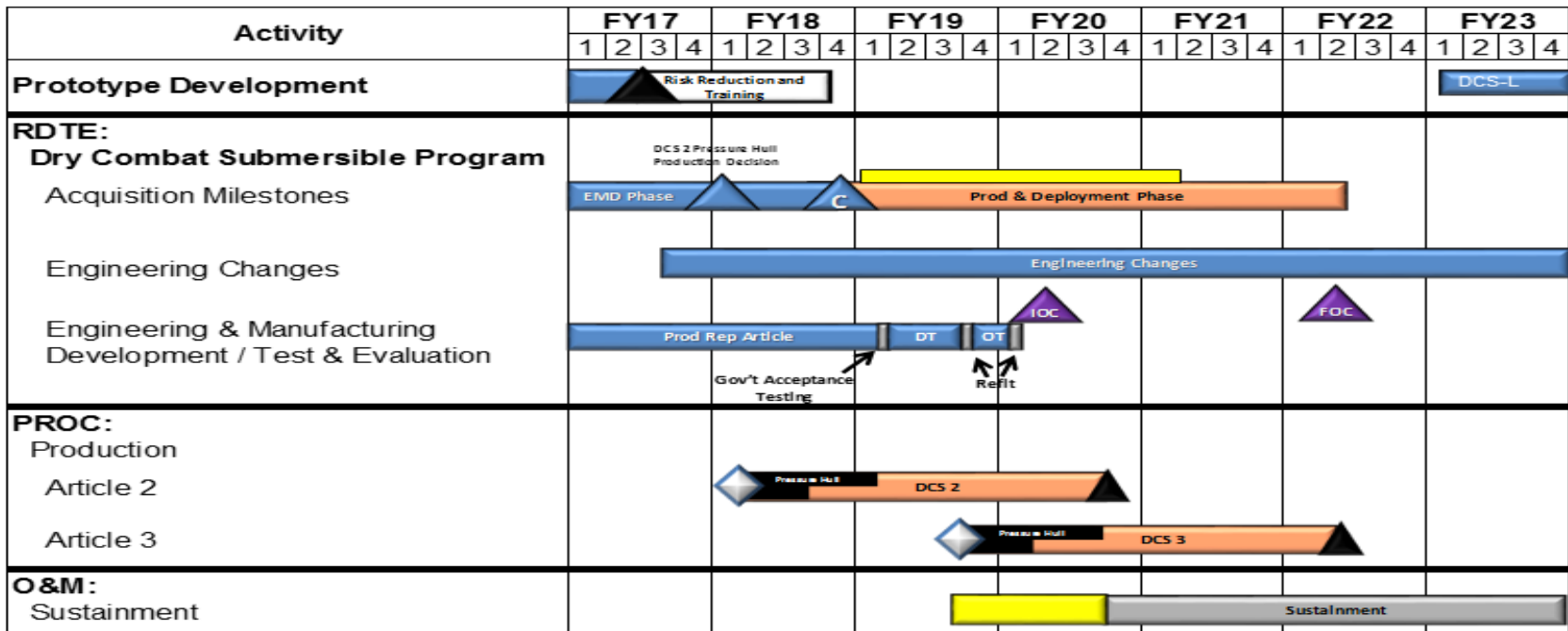
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

Dry Combat Submersible Schedule

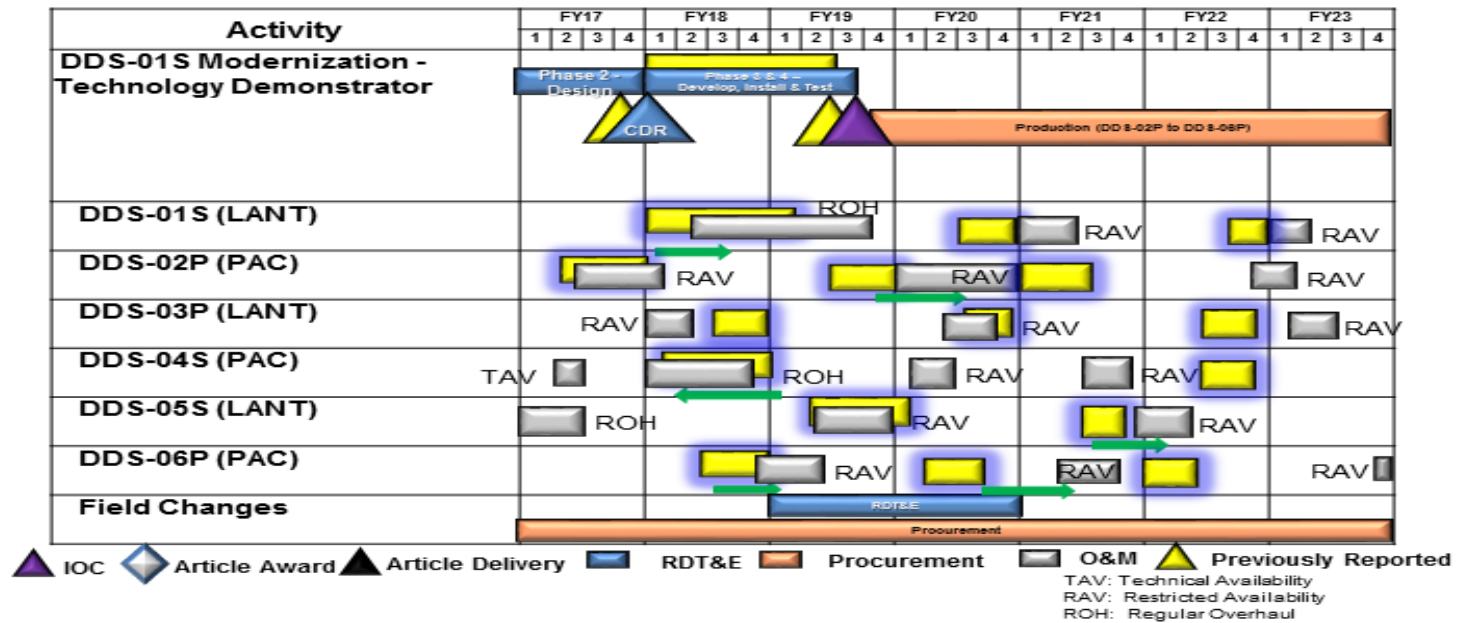


▲ IOC/FOC
 ◆ Article Award
 ▲ Article Delivery
 ▬ RDT&E
 ▬ Procurement
 ▬ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>

Dry Deck Shelter Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

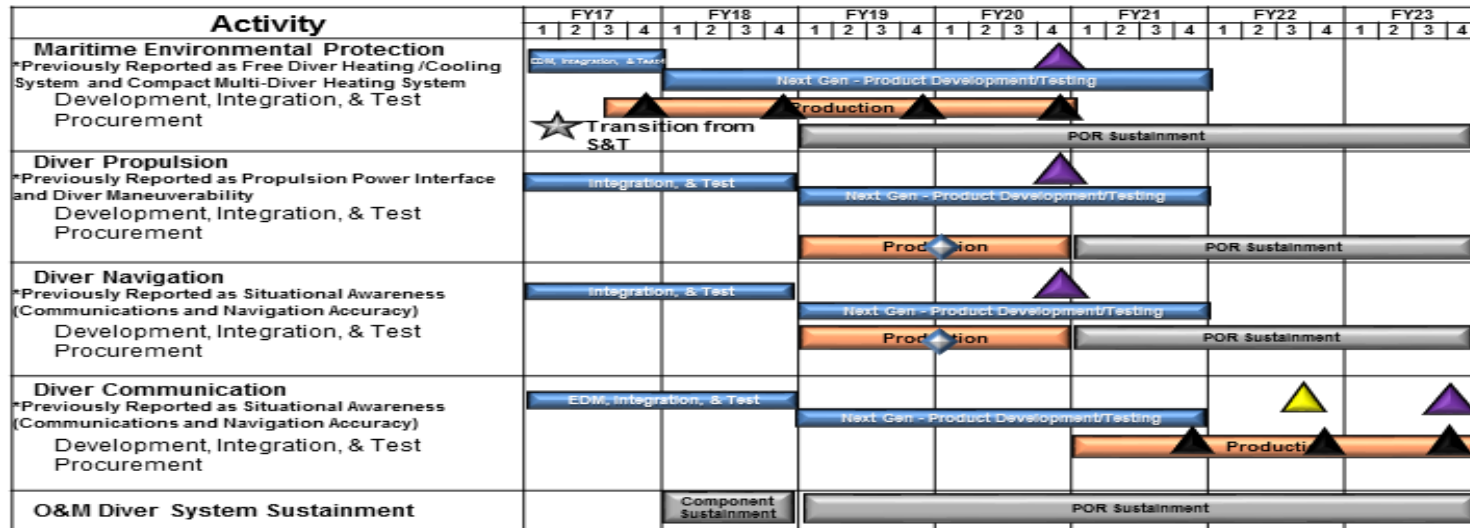
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

SOF Combat Diving Schedule



▲ IOC
 ◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Shallow Water Combat Submersible</i>				
Engineering Changes	2	2017	4	2023
Engineering Development Model Acceptance	1	2017	2	2018
Developmental Test	1	2017	2	2018
IOT&E	2	2018	1	2019
<i>Dry Combat Submersibles</i>				
Prototype Development	1	2017	2	2017
DCS-L	1	2023	4	2023
Engineering and Manufacturing Development Phase	1	2017	4	2018
Engineering Changes	3	2017	4	2023
Milestone C	4	2018	4	2018
Production Representative Article	1	2017	2	2019
Developmental Test and Evaluation	2	2019	3	2019
Operational Test and Evaluation	4	2019	1	2020
<i>Dry Deck Shelter Modernization</i>				
Phase 2 Design	1	2017	4	2017
Phase 3 & 4 Development	1	2018	3	2019
Critical Design Review	1	2018	1	2018
Field Changes	1	2019	4	2020
<i>SOF Combat Diving</i>				
Maritime Environmental Protection Development, Integration, and Test	1	2017	4	2021
Propulsion Development / Manufacturing / Test / Integration	1	2017	4	2021
Navigation Development / Manufacturing / Test / Integration	1	2017	4	2021

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Communications Development / Manufacturing / Test / Integration	1	2017	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command										Date: February 2018		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S1684 / <i>Surface Craft</i>			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S1684: <i>Surface Craft</i>	29.185	3.882	7.201	15.574	-	15.574	9.172	8.387	3.625	3.697	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement (P3I) and technology insertion engineering changes to meet the unique requirements of Special Operations Forces (SOF). This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2017	FY 2018	FY 2019
Title: Combatant Craft Medium (CCM) Mk 1	1.202	1.662	0.788
Description: This sub-project is a semi-enclosed multi-mission combatant craft for platoon-size maritime mobility in maritime denied environments. It is multi-mission capable, including Maritime Interdiction, Insert / Extract, and Visit, Board, Search, and Seizure (VBSS) Operations. CCM is Naval Special Warfare's (NSW) craft-of-choice for long-range, high-payload SOF mobility operations in denied environments up to high threat. CCM has NSW's best Iron Triangle: 40 knot (kt) speed; 4 crew + 19 passengers (pax) / 10,000 pound (lb) payload; and 600 nautical miles (nm) range. CCM Mk 1 payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 60 feet long, CCM is C-17 / C5 transportable and can launch/recover by well deck or shore based trailer.			
FY 2018 Plans: Continue integration of CCFLIR2 and begins integration of Tactical Operations Center (TOCNET) Intercommunications System and Joint Threat Warning System (JTWS).			
FY 2019 Plans: Continues integration of CCFLIR2, TOCNET Intercommunications System and JTWS and begins integration of Threat Awareness System (TAS).			
FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was reduced by \$0.874 million to account for the availability of prior year execution balances.			
Title: Combatant Craft Heavy (CCH)	0.542	0.877	0.885
Description: This sub-project represents a family of solutions that provides platoon-size maritime surface mobility. The current CCH is the Sea, Air, Land Insertion, Observation, and Neutralization (SEALION) craft. SEALION is a fully-enclosed, climate-controlled, semi-submersible craft that operates in denied environments up to high-threat. SEALION is NSW's most versatile and			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018			
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2017	FY 2018	FY 2019	
<p>survivable combatant craft and the craft-of-choice for sensitive maritime intelligence, surveillance, and reconnaissance missions and those missions requiring a prolonged presence in denied environments. Its clandestine mobility capability is only exceeded by an undersea craft. Iron Triangle: 40 kt speed; 7 crew + 12 pax / 3,300 lb payload; and 400 nm range. SEALION payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 77+ feet long, SEALION is C-17/C-5 transportable and can launch/recover by well deck or shore based mobile travel lift or crane.</p> <p>FY 2018 Plans: Continue CCFLIR2 integration and continue development and integration of upgraded Satellite Communications (SATCOM) antennas. Begin development of CCH Next.</p> <p>FY 2019 Plans: Completes CCFLIR2 integration and continues development and integration of upgraded SATCOM antennas and development of CCH Next. Begins integration of TAS.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.008 million is due to minor adjustments.</p>					
<p>Title: Combatant Craft Mission Equipment (CCME)</p> <p>Description: This sub-project provides a rapid response capability to support SOF combatant craft systems, subsystems, and their emerging requirements. CCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability. Demonstrations and modifications may be made to support emerging capability enhancements such as, but not limited to, conformal antennas, identification friend-or-foe capabilities, enhanced communications, weapon integration, software refresh, and navigation subsystems in support of future missions. Solutions to these emerging requirements may be commercial-off-the-shelf leveraged from other Government agencies, or new solutions.</p> <p>FY 2018 Plans: Evaluate candidate solutions for technology development to include, but not limited to, Maritime Precision Engagement, family of antennas testing, Airborne Mission Networking Marinization, and situational awareness.</p> <p>FY 2019 Plans: Continues evaluation of candidate solutions for technology development to include, but not limited to, Maritime Precision Engagement, family of antennas testing, Airborne Mission Networking Marinization, and situational awareness.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase of \$0.018 million is due to minor adjustments.</p>		1.717	1.107	1.125	
<p>Title: Combatant Craft Assault (CCA)</p>		0.421	0.510	0.515	

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command		Date: February 2018
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019
Begin design and development of the production representative article.			
<i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> Increase of \$10 million to initiate the design and development of the production representative article.			
Accomplishments/Planned Programs Subtotals	3.882	7.201	15.574

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• PROC/0204SCCS: <i>Combatant Craft Systems</i>	46.548	23.272	7.313	-	7.313	38.433	31.372	37.854	66.617	Continuing	Continuing

Remarks

N/A

D. Acquisition Strategy

- CCM was a two-phase source selection process. Phase I involved a Small Business Set-Aside competition for two vendors to design, build and deliver test articles. Phase II selected a single vendor to provide a fully integrated baseline craft system for test and evaluation with options for production, engineering support, and contractor logistic support.
- CCH SEALION I & II were transitioned from United States Navy advanced technology demonstrator craft to USSOCOM. Sustainment for SEALION I & II is conducted via Special Operations Forces Support Activity. SEALION III is Sole Source to the OEM in order to take advantage of previous Government investments in manufacturing infrastructure for SEALION I & II.
- CCME emphasizes on spearheading Technology Readiness Level (TRL) 6 technology for successful transition into SOF Combatant Crafts. CCME accomplishes this by employing the full spectrum of contracting services, using existing contracts where appropriate, and leveraging from other Government agencies to include the Services and USSOCOM SOF AT&L Science & Technology Directorate. CCME focuses on developing the technology for maturity, marinization and compatibility, finally transitioning to the craft. The integration and procurement piece is managed by the individual Combatant Craft Program.
- CCA utilizes various contracting and better buying power practices to develop, test, and integrate capability enhancements required to increase the craft's current performance envelope.
- TAS PM JTWS will perform market research to determine feasibility and appropriateness of conducting a full and open competition. PM JTWS is planning a developmental effort in FY18/FY19 to mature existing technologies. PM-SS will retain funds to support integration across the family of Combatant Craft.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 7	PE 1160483BB / <i>Maritime Systems</i>	S1684 / <i>Surface Craft</i>

- MPE will be a full and open competition of the launcher systems with follow-on government-led integration effort leveraging lessons learned from similar rapid integration efforts on other combat tested SOF platforms.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>
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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat Craft Medium (CCM)	C/Variou	Various : Various	11.089	1.202	Jun 2017	1.662	Nov 2017	0.788	Nov 2018	-		0.788	Continuing	Continuing	-
Combatant Craft Heavy (CCH)	C/Variou	Various : Various	4.392	0.542	Apr 2017	0.877	Jan 2018	0.885	Jan 2019	-		0.885	Continuing	Continuing	-
Combatant Craft Assault	C/Variou	Various : Various	0.000	0.421	Apr 2017	0.510	Nov 2017	0.515	Nov 2018	-		0.515	Continuing	Continuing	-
Combat Craft Mission Equipment (CCME)	C/Variou	Various : Various	2.939	1.514	Mar 2017	0.878	Nov 2017	0.888	Nov 2018	-		0.888	Continuing	Continuing	-
Threat Awareness System (TAS)	C/Variou	Various : Crane, IN	0.000	-		3.045	Mar 2018	1.661	Mar 2019	-		1.661	Continuing	Continuing	-
Prior Year Costs	C/Variou	Various : Various	3.679	-		-		-		-		-	0.000	3.679	-
Maritime Precision Engagement (MPE)	C/Variou	Various : Various	-	-		-		9.800	Dec 2018	-		9.800	Continuing	Continuing	-
Subtotal			22.099	3.679		6.972		14.537		-		14.537	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CCME	C/Variou	Various : Various	1.155	0.203	Jun 2017	0.229	Nov 2017	0.237	Nov 2018	-		0.237	Continuing	Continuing	-
TAS	C/Variou	Various : Various	-	-		-		0.239	Mar 2019	-		0.239	Continuing	Continuing	-
Prior Year Costs	C/Variou	Various : Various	2.395	-		-		-		-		-	0.000	2.395	-
Subtotal			3.550	0.203		0.229		0.476		-		0.476	Continuing	Continuing	N/A

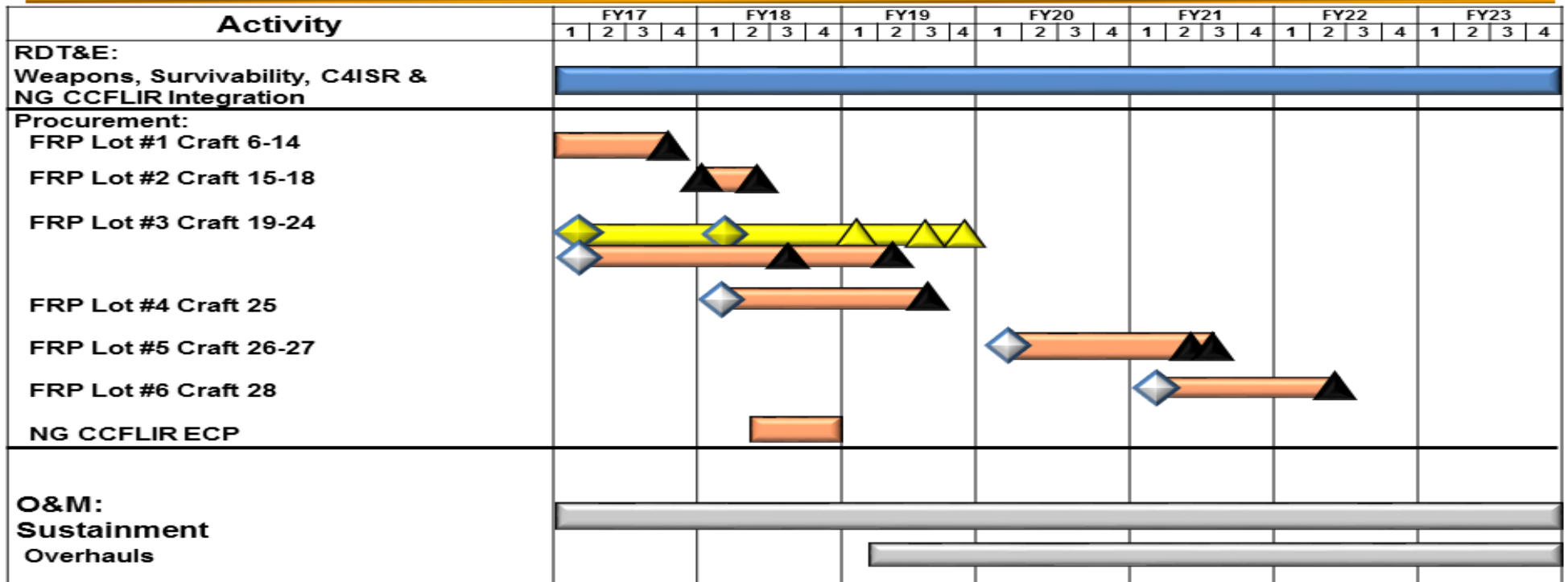
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TAS	C/Variou	Various : Various	-	-		-		0.361	Mar 2019	-		0.361	Continuing	Continuing	-
MPE	C/Variou	Various : Various	-	-		-		0.200	Dec 2018	-		0.200	Continuing	Continuing	-
Prior Year Costs	C/Variou	Various : Various	3.536	-		-		-		-		-	0.000	3.536	-
Subtotal			3.536	-		-		0.561		-		0.561	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>
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Combatant Craft Medium Schedule



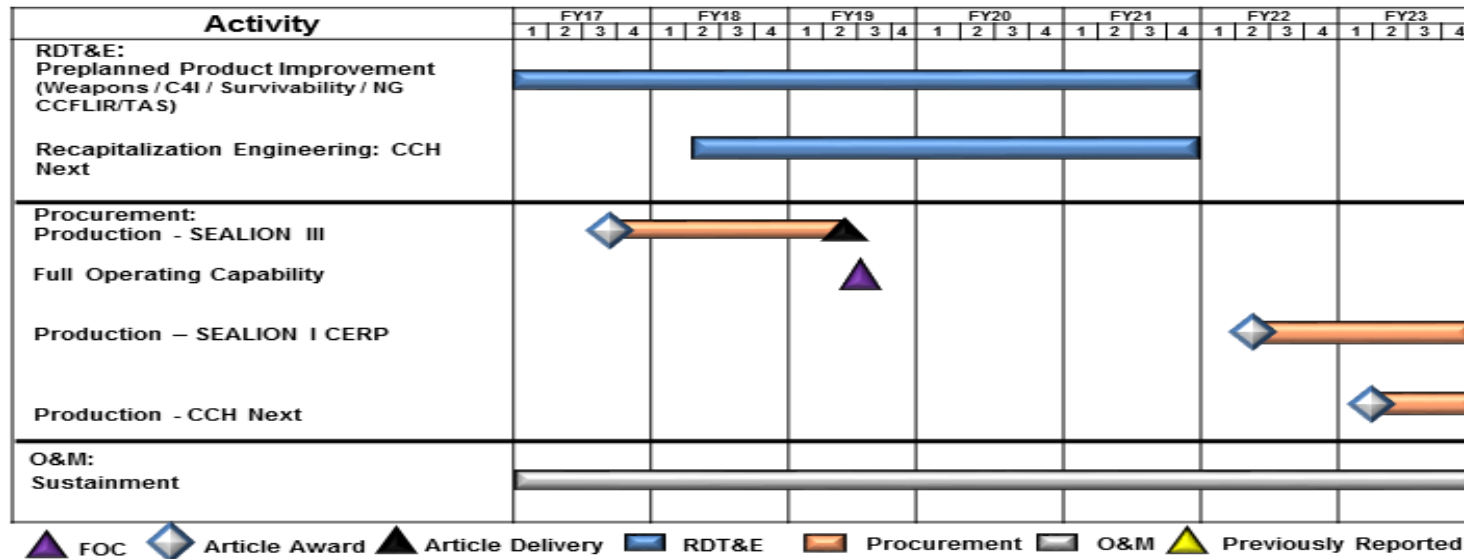
▲ IOC
 ◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>
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Combatant Craft Heavy Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

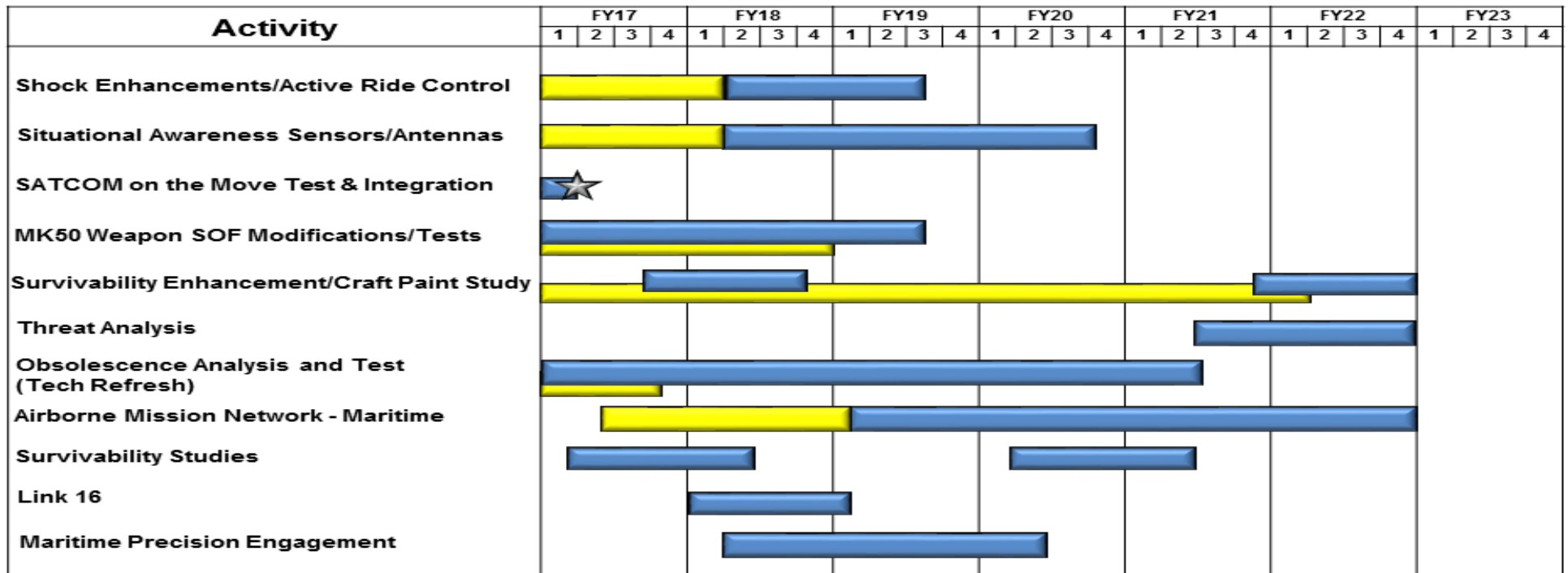
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / *Maritime Systems*

Project (Number/Name)
S1684 / *Surface Craft*

CCME Schedule



▲ IOC
 ◆ Article Award
 ▲ Article Delivery
 ■ RDT&E
 ■ Procurement
 ■ O&M
 ▲ Previously Reported
 ★ Transitioned/Completed

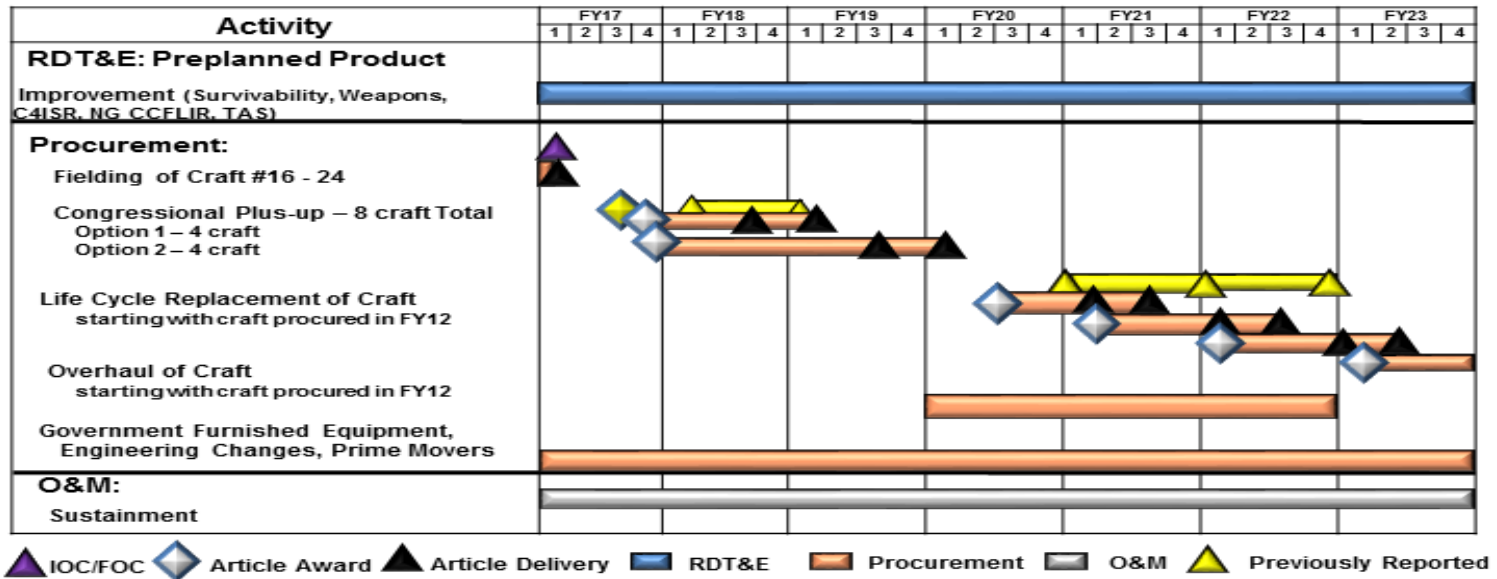
NOTE: ALL CCME Procurements will be accomplished in craft lines

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S1684 / Surface Craft

Combatant Craft Assault Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2019 United States Special Operations Command

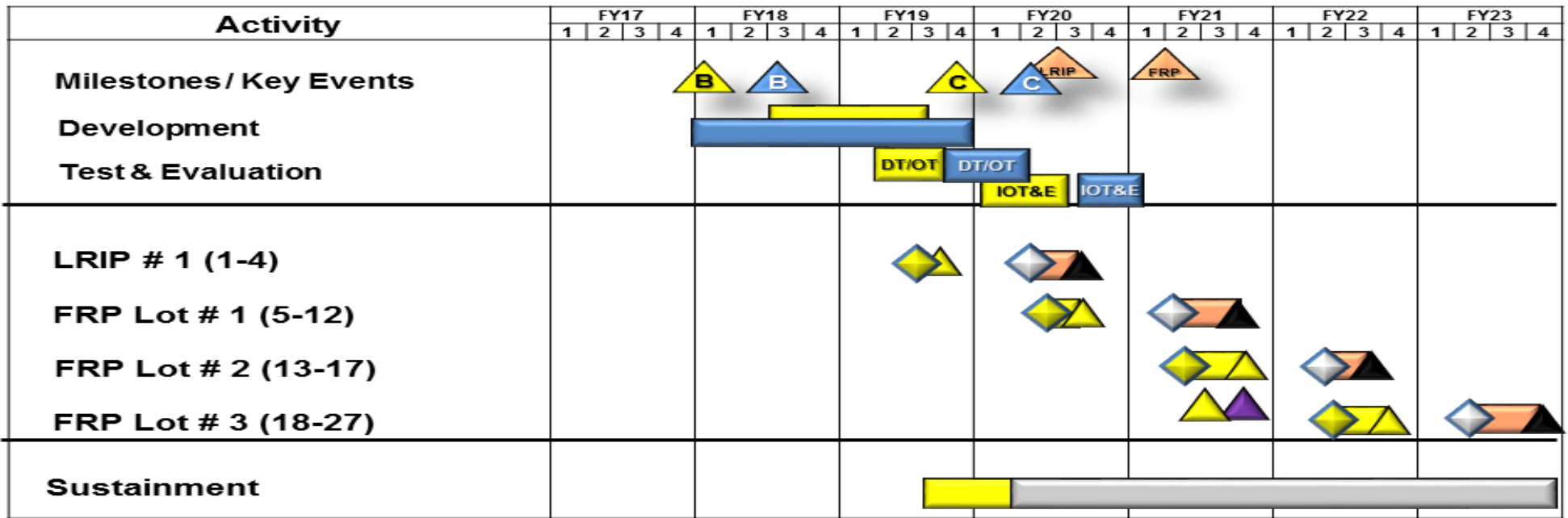
Date: February 2018

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S1684 / Surface Craft

Threat Awareness System Schedule

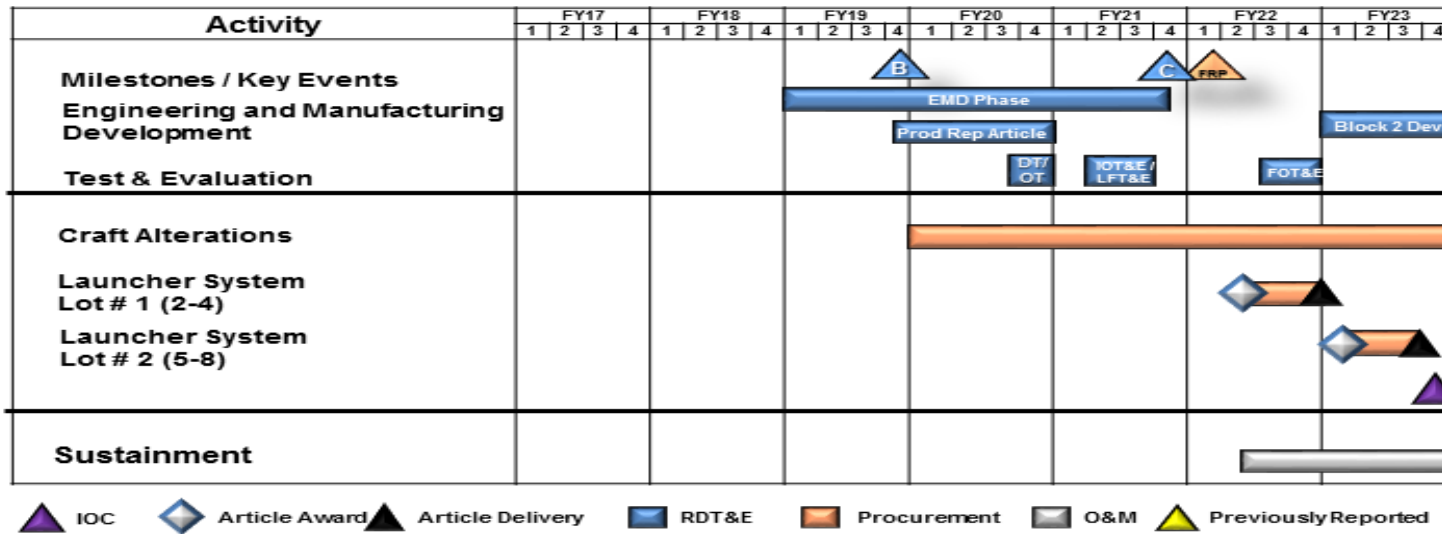


Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S1684 / Surface Craft

Maritime Precision Engagement Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Combatant Craft Medium				
Weapons, Survivability, C4ISR and NG CCFLIR Integration	1	2017	4	2023
Combatant Craft Heavy				
Preplanned Product Improvement (Weapons / C4I / Survivability / NG CCFLIR / TAS)	1	2017	4	2021
Recapitalization Engineering: CCH Next	2	2018	4	2021
Combatant Craft Mission Equipment				
Shock Enhancements/Active Ride Control	2	2018	3	2019
Situational Awareness Sensors/Antennas	2	2018	4	2020
SATCOM on the Move Test & Integration	2	2017	2	2017
MK50 Weapon SOF Modifications/Tests	1	2017	3	2019
Survivability Enhancement/Craft Paint Study	3	2017	4	2018
Threat Analysis	3	2021	4	2022
Obsolescence Analysis and Test (Tech Refresh)	1	2017	3	2021
Airborne Mission Network - Maritime	1	2019	4	2022
Survivability Studies	2	2017	2	2021
Link 16	1	2018	1	2019
Maritime Precision Engagement	2	2018	2	2020
Combatant Craft Assault				
Preplanned Product Improvement (Survivability, Weapons, C4ISR, NG CCFLIR, TAS)	1	2017	4	2023
Threat Awareness System				
Milestone B	3	2018	3	2018
Milestone C	2	2020	2	2020
Development	1	2018	4	2019

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S1684 / <i>Surface Craft</i>
--	--	--

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Test and Evaluation	4	2019	1	2021
<i>Maritime Precision Engagement</i>				
Milestone B	4	2019	4	2019
Milestone C	4	2021	4	2021
Engineering and Manufacturing Development	1	2019	4	2021
Production Representative Article	4	2019	4	2020
Test and Evaluation	4	2020	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160489BB / <i>Global Video Surveillance Activities</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	49.976	3.841	4.661	4.780	-	4.780	5.388	5.496	5.606	5.718	Continuing	Continuing
S500C: <i>Global Video Surveillance Activities</i>	49.976	3.841	4.661	4.780	-	4.780	5.388	5.496	5.606	5.718	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program. Details are provided under separate cover.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.841	4.661	4.820	-	4.820
Current President's Budget	3.841	4.661	4.780	-	4.780
Total Adjustments	0.000	0.000	-0.040	-	-0.040
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.040	-	-0.040

Change Summary Explanation

Funding:

FY2017: None.

FY2018: None.

FY2019: Decrease of \$0.040 million is due to a Department economic assumption decrease.

Technical: None.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 United States Special Operations Command **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160490BB / <i>Operational Enhancements Intelligence</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	85.993	12.034	12.049	12.176	-	12.176	13.573	13.844	14.121	14.403	Continuing	Continuing
S500D: <i>Operational Enhancements Intelligence</i>	85.993	12.034	12.049	12.176	-	12.176	13.573	13.844	14.121	14.403	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project is part of the Military Intelligence Program. This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Program Change Summary (\$ in Millions)

	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	11.834	12.049	12.279	-	12.279
Current President's Budget	12.034	12.049	12.176	-	12.176
Total Adjustments	0.200	0.000	-0.103	-	-0.103
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.200	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.103	-	-0.103

Change Summary Explanation

Funding:

FY2017: Details for increase of \$0.200 million are available under separate cover.

FY2018: None.

FY2019: Decrease of \$0.103 million is due to a Department economic assumption decrease.

Schedule: None.

Technical: None.

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



Washington Headquarters Service

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Washington Headquarters Service • Budget Estimates FY 2019 • RDT&E Program

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Research, Development, Test & Eval, DW	768	29,594	29,594		
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation	FY 2018		FY 2018		FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Research, Development, Test & Eval, DW				29,594		29,594
Total Research, Development, Test & Evaluation				29,594		29,594

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

<u>Appropriation</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>
Research, Development, Test & Eval, DW	30,364		30,364
Total Research, Development, Test & Evaluation	30,364		30,364

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

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	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
Advanced Technology Development		29,594	29,594		
Management Support	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		
Summary Recap of FYDP Programs					
Research and Development		29,594	29,594		
Administration and Associated Activities	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Department of Defense
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

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	FY 2018 Less Enacted Div B	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities					
Advanced Technology Development			29,594		29,594
Management Support					
Total Research, Development, Test & Evaluation			29,594		29,594
Summary Recap of FYDP Programs					
Research and Development			29,594		29,594
Administration and Associated Activities					
Total Research, Development, Test & Evaluation			29,594		29,594

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Summary Recap of Budget Activities	FY 2019 Base	FY 2019 OCO	FY 2019 Total

Advanced Technology Development	29,364		29,364
Management Support	1,000		1,000
Total Research, Development, Test & Evaluation	30,364		30,364
Summary Recap of FYDP Programs			

Research and Development	30,364		30,364
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	30,364		30,364

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
<u>Summary Recap of Budget Activities</u>					
Advanced Technology Development		29,594	29,594		
Management Support	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		
<u>Summary Recap of FYDP Programs</u>					
Research and Development		29,594	29,594		
Administration and Associated Activities	768				
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities						
Advanced Technology Development				29,594		29,594
Management Support						
Total Research, Development, Test & Evaluation				29,594		29,594
Summary Recap of FYDP Programs						
Research and Development				29,594		29,594
Administration and Associated Activities						
Total Research, Development, Test & Evaluation				29,594		29,594

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Advanced Technology Development	29,364		29,364
Management Support	1,000		1,000
Total Research, Development, Test & Evaluation	30,364		30,364
 Summary Recap of FYDP Programs -----			
Research and Development	30,364		30,364
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	30,364		30,364

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Washington Headquarters Services	768	29,594	29,594		
Total Research, Development, Test & Evaluation	768	29,594	29,594		

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation	FY 2018		FY 2018	FY 2018	
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Washington Headquarters Services			29,594		29,594
Total Research, Development, Test & Evaluation			29,594		29,594

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Defense-Wide
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

01 Feb 2018

<u>Appropriation</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>
Washington Headquarters Services	30,364		30,364
Total Research, Development, Test & Evaluation	30,364		30,364

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03		29,594	29,594			U
		Advanced Technology Development			29,594	29,594			
168	0606589D8W	Defense Digital Service (DDS) Development Support	06						U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	768					U
Total Research, Development, Test & Eval, DW				768	29,594	29,594			

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + e Emergency	S
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03				29,594		29,594	U
		Advanced Technology Development					29,594		29,594	
168	0606589D8W	Defense Digital Service (DDS) Development Support	06							U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06							U
Total Research, Development, Test & Eval, DW							29,594		29,594	

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03	29,364		29,364	U
		Advanced Technology Development		29,364		29,364	
168	0606589D8W	Defense Digital Service (DDS) Development Support	06	1,000		1,000	U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	1,000		1,000	U
Total Research, Development, Test & Eval, DW				30,364		30,364	

R-119PB: FY 2019 President's Budget (Published Version), as of February 1, 2018 at 12:32:39

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Washington Headquarters Services
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03		29,594	29,594			U
		Advanced Technology Development			29,594	29,594			
168	0606589D8W	Defense Digital Service (DDS) Development Support	06						U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	768					U
Total Washington Headquarters Services				768	29,594	29,594			

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Washington Headquarters Services
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Element Number	Program Item	Act	FY 2018		FY 2018 Remaining Req Emergency	FY 2018		FY 2018 Remaining Req Base + OCO + e Emergency	S	
				FY 2018 Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs		FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs			
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03					29,594		U	
		Advanced Technology Development						29,594			
168	0606589D8W	Defense Digital Service (DDS) Development Support	06							U	
186	0903235D8W	Joint Service Provider (JSP) Management Support	06							U	
Total Washington Headquarters Services									29,594		

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Washington Headquarters Services
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

01 Feb 2018

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
40	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03	29,364		29,364	U
		Advanced Technology Development		29,364		29,364	
168	0606589D8W	Defense Digital Service (DDS) Development Support	06	1,000		1,000	U
186	0903235D8W	Joint Service Provider (JSP) Management Support	06	1,000		1,000	U
Total Washington Headquarters Services				30,364		30,364	

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Washington Headquarters Service • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
40	03	0603342D8W	Defense Innovation Unit Experimental (DIUx).....	Volume 5 - 1187

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
168	06	0606589D8W	Defense Digital Service (DDS).....	Volume 5 - 1195
186	06	0903235D8W	Joint Service Provider (JSP).....	Volume 5 - 1199

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Washington Headquarters Service • Budget Estimates FY 2019 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

Program Element Title	Program Element Number	Line #	BA	Page
Defense Digital Service (DDS)	0606589D8W	168	06.....	Volume 5 - 1195
Defense Innovation Unit Experimental (DIUx)	0603342D8W	40	03.....	Volume 5 - 1187
Joint Service Provider (JSP)	0903235D8W	186	06.....	Volume 5 - 1199

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603342D8W I <i>Defense Innovation Unit Experimental (DIUx)</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing
434: <i>DIUx</i>	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing

Note

Defense Innovation Unit Experimental (DIUx) transfer from OSD (PE 0602230D8Z) to WHS (PE 0603342D8W)

The U.S. Department of Defense (DoD) relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. The Defense Innovation Unit Experimental (DIUx) increases the Department's access to leading-edge technologies and talent that reside in the commercial sector, with the ultimate goal of accelerating innovation into the hands of the warfighter. Working across the country, and in collaboration with allied international partners, DIUx is developing new ways of doing business, growing our defense industrial base to include "non-traditional" companies that had previously not collaborated with the military, working with traditional vendors in novel ways to increase efficiency, and challenging innovators to share their knowledge and expertise in support of our nation's defense.

A. Mission Description and Budget Item Justification

Defense Innovation Unit Experimental (DIUx) was established in April 2015 and DIUx 2.0 in May 2016.

DIUx mission is to accelerate innovation in the commercially-focused technology sector to the warfighter. Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS) with a functional realignment of \$148.8 million across the FYDP to WHS.

The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors. An objective of this program is to obtain innovative ideas from industry that have low technology readiness and are of high priority to DoD leadership. Incoming proposals will be assessed to ensure alignment with the DoD's strategic objectives to increase and strengthen our nation's security.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603342D8W I <i>Defense Innovation Unit Experimental (DIUx)</i>
---	--

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	29.594	29.364	-	29.364
Current President's Budget	0.000	29.594	29.364	-	29.364
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the operational control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS),with functional realignment of \$148.8 million across the FYDP Washington Headquarters Services (WHS) beginning in FY 2018.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
434: <i>DIUx</i>	0.000	0.000	29.594	29.364	-	29.364	29.398	29.419	30.037	30.638	Continuing	Continuing

A. Mission Description and Budget Item Justification

DIUx mission is to accelerate innovation to the warfighter by leveraging commercial technology innovations. Initially, this program was managed by the Under Secretary of Defense Acquisition, Technology, and Logistics, (USD, AT&L) with functional realignment of \$148.8 million across the FYDP to Washington Headquarters Services (WHS) beginning in FY 2018. The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors. An objective of this program is to obtain innovative ideas from industry that have low technology readiness and are of high priority to DoD leadership. Incoming proposals will be assessed to ensure alignment with the DoD's strategic objectives to increase and strengthen our nation's security.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Defense Innovation Unit - Experimental (DIUx)	-	29.594	29.364	-	29.364
<p>FY 2018 Plans: The Defense Innovation Unit Experimental (DIUx) is chartered to expand the Department's access to innovative companies and technologies that enable the development of leading-edge, asymmetric capabilities and help spur development of new ways to keep the United States on par or ahead of the nation's most advanced adversaries. The Secretary of Defense's strategic priorities includes improving the Departments lethality through multiple means to include the openness and willingness to evolve by adopting new ideas to ensure a better future for the Department and the Nation. One of the tenets of this priority is to expand the Department's ability to access leading edge technological innovations through commercial partnerships. The funding DIUx executes is critical as it incentivizes non-traditional defense sector companies to work with and invest in advancing DoD future capabilities.</p> <p>Some of the projects undertaken include: - Hardened Network Defense that provides warfighters improved network security by obscuring vital services and data, thereby significantly decreasing the ability of advancing cyber threats to map, attack or exploit tactical systems. - Command, Control, and Situational Awareness web-based software platform that supports user's ability to visualize relevant activities and operational metrics, collaboratively plan and approve defense activities, and monitor/manage subsequent. DIUx projects signal investment targets for venture capital opportunities. While</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>
--	--	---

B. Accomplishments/Planned Programs (\$ in Millions)

these are small when compared to the DoD total budget, the 3rd party investment multiplier they generate are without equal.

FY 2019 Base Plans:

The U.S. Department of Defense relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. With outposts in Silicon Valley, Boston Massachusetts, and Austin Texas the Defense Innovation Unit Experimental (DIUx) serves as a bridge between those in the U.S. military executing on some of our nation's toughest security challenges and companies operating at the cutting edge of technology. DIUx is an experiment that continuously repeat how best to identify, contract, and prototype novel innovations through sources traditionally not available to the Department of Defense, with the ultimate goal of accelerating technology into the hands of warfighters and keep them on the cutting edge of technology.

FY 2018 to FY 2019 Increase/Decrease Statement:

FY 2019 Plans Defense Innovation Unit Experimental (DIUx) is one of the Secretary of Defense's priorities in advancing technology, especially artificial intelligence, to help the U.S. Military become more lethal and capable of defending the nation. DIUx's objective is to rapidly solve the problems of our DoD customers and deploy those solutions. Accordingly, DIUx requirements are driven by DoD customers in the Services, Defense Agencies, and Combatant Commands. They come to DIUx with their most challenging and most compelling technological problems. DIUx works to solve challenges and issues for the Department in areas such as Artificial Intelligence and Machine Learning, Autonomy, Human Systems, Information Technology, and Space. DIUx specialized staff carry out the niche functions of its three teams: Venture, Foundry and Engagement. The Venture team identifies emerging commercial technology and explores its military applicability. The Foundry team works with technology that is still maturing and is not yet ready for production and the Engagement Team introduces entrepreneurs to military problems and the military to entrepreneurs.

FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
-	29.594	29.364	-	29.364
Accomplishments/Planned Programs Subtotals				

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0901583D8W: O&M	0.000	24.244	40.754	1.000	41.754	40.771	37.637	37.694	37.749	Continuing	Continuing

Remarks

DIUx O&M mission support funding.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>

Remarks
The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors.

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>DIUx Partnering</i>																												
Innovation Assessments																												
<i>Technology Assesment</i>																												
Innovation Prototyping																												
<i>Research and Development</i>																												
Delivery coordination																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Washington Headquarters Service		Date: February 2018
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>DIUx Partnering</i>				
Innovation Assessments	4	2018	4	2023
<i>Technology Assesment</i>				
Innovation Prototyping	4	2019	4	2023
<i>Research and Development</i>				
Delivery coordination	3	2020	4	2023

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
281: <i>DDS</i>	-	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing

Note

The Defense Digital Service (DDS) was launched in November 2015 and was formally chartered under DoD Directive 5105.87 in January 2017 in the Office of the Secretary of Defense (OSD) of the Department of Defense (DoD). Since that time, OSD has presented over 100 potential projects to DDS, some of which would benefit significantly from the enhanced prototyping capabilities of DDS. With appropriate funding, DDS leverage, its private sector expertise to fully support the build of a system prototype / proof-of-concept. RDT&E funding is required to support the DDS mission, which includes the ability to build software prototypes to prove out concepts for mission critical projects identified by the Department.

Ensuring that DDS has RDT&E capabilities will increase DoD's ability to leverage DDS's unique technical expertise to determine which private sector software development best practices and/or technology work best for the Department. Furthermore, the development and testing of DDS prototypes, and the insight gained, would significantly lower development costs and delivery times through traditional DoD methods.

A. Mission Description and Budget Item Justification

DDS was created to bring private sector software development best practices, talent, and technology to the Department's hardest software and technology problems. Since its launch in November 2015, DDS has project demands from OSD that have increased exponentially; some of those requests would benefit from robust prototyping / proof-of-concept capabilities by DDS teams. The former is dependent on RDT&E funding that supports the ability to acquire the most current technological solution and/or support from vendors well versed in the most advanced technological solutions.

The requested RDT&E funds will enable DDS to build prototypes and implement proof-of-concept tests for some key OSD projects. These projects will support missions in and out of theater, as well as long term goals of the department to modernize its offensive and defensive technological capabilities. DoD interest in leveraging DDS to operate in this area to solve hard and impossible problems is persistent. With appropriate funding, DDS can use the superior technical expertise of its staff, as well as ability to quickly deliver usable products to meet demand.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606589D8W <i>I Defense Digital Service (DDS)</i>
--	--

B. Program Change Summary (\$ in Millions)	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019 Base</u>	<u>FY 2019 OCO</u>	<u>FY 2019 Total</u>
Previous President's Budget	0.000	0.000	1.000	-	1.000
Current President's Budget	0.000	0.000	1.000	-	1.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>	Project (Number/Name) 281 / <i>DDS</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
281: <i>DDS</i>	-	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Defense Digital Service (DDS) requests approximately \$1 million in Core RDT&E funding in FY2019 to build prototypes / proof-of-concepts for software and hardware development efforts. DDS will leverage its expertise in private industry best practices to develop prototypes that can be scaled to production to support the overall mission of DoD. This funding will help to ensure that DDS can capitalize on its unique ability to build, and/or advise customers on how to build, prototypes and proof-of-concepts using private sector best practices.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Defense Digital Service (DDS)	0.000	-	1.000
FY 2019 Plans:			
The U.S. Department of Defense needs on innovation to maintain our nation's ability to deter, and if need be, prevail in physical and technological conflict. With a team firmly rooted in the heart of the Pentagon, Defense Digital Service (DDS) serves as a nimble unit with the ability to quickly mobilize and tackle some the DoDs toughest technological challenges. DDS's approach leverages industry best practices to efficiently navigate policy, contracts, and tech blockers to reach working and scalable solutions to hardware and software problems. The ultimate goal of the team is to support DoD in finding and implementing relevant tech solutions to hard and/or impossible problems that when solved, increase the efficiency and effectiveness of the department in carrying out its mission to defend the United States and its domestic and overseas interests. Ultimately, the purpose and goal of the team is to ensure that solutions reach the hands of end users, including warfighters, in short timelines, so that compound problems from the existing problem sets do not persist.			
FY 2018 to FY 2019 Increase/Decrease Statement:			
Defense Digital Service Research and Development is one of the Secretary of Defense's top priorities with the intent of advancing and modernizing technology, especially software systems, critical to the successful implementation of a variety of department and warfighter missions. DDS requirements are driven by challenging technical problems identified by the Secretary of Defense where technology is failing the Department of Defense mission. These problems span across classified and unclassified problem spaces, and range from software development, piloting the use of commercial software as a replacement for antiquated government systems, and modernizing and refactoring broken systems. Some examples of current projects include: replacing the MEPCOM Integrated Resources System, reimagining the user interface and associated databases for the Defense Property System, devising a hard and software solution to counter Unmanned Aircraft Systems that attack warfighters in theater, and developing a novel and modern approach to network defense. Our team is comprised of digital experts with backgrounds in			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service	Date: February 2018
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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0606589D8W / <i>Defense Digital Service (DDS)</i>	Project (Number/Name) 281 / <i>DDS</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
policy, contracts, design, and engineering who collectively use their private industry and federal government experience to identify solutions to problems and rapidly devise and implement solutions.			
Accomplishments/Planned Programs Subtotals	0.000	-	1.000

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

Defense Digital Service will build, or manage the build, of prototypes and proof-of-concepts that will solve hard and impossible technological problems in DoD.

D. Acquisition Strategy

N/A

E. Performance Metrics

NA

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6:</i> <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0903235D8W <i>I Joint Service Provider (JSP)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	0.000	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
945: <i>Miscellaneous - IT Initiative</i>	0.000	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Washington Headquarters Services (WHS) Information Technology (IT) program provides ongoing research, test, and development and enhancement initiatives for the Office of the Secretary of Defense (OSD), OSD Principal Staff Assistants, and WHS Directorates. Ongoing initiatives include enterprise storage testing, enterprise performance and productivity analysis, enterprise/business applications development and enhancements, operational support enhancements, and information assurance testing and development.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.768	0.000	0.000	-	0.000
Current President's Budget	0.768	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

The JSP Program was transferred to DISA in FY 2018.

Defense Information System Agency (DISA) assumes operational control of the Joint Information Service Provider (JSP) in accordance with Deputy Secretary of Defense Directive Memorandum, Consolidation of Pentagon Information Technology Operations, 1 May 2015.

The FY 2017 funding remained with WHS and was executed by JSP.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Washington Headquarters Service **Date:** February 2018

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0903235D8W / <i>Joint Service Provider (JSP)</i>	Project (Number/Name) 945 / <i>Miscellaneous - IT Initiative</i>
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COST (\$ in Millions)	Prior Years ⁽⁺⁾	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
<i>945: Miscellaneous - IT Initiative</i>	0.000	0.768	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

⁽⁺⁾ The sum of all Prior Years is \$0.000 million less than the represented total due to several projects ending

A. Mission Description and Budget Item Justification

P945 - Miscellaneous IT Initiative - The WHS provides various IT support for the WHS/OSD to align processes and information technology that will enable mission accomplishment.

B. Accomplishments/Planned Programs (\$ in Millions)

<u>B. Accomplishments/Planned Programs (\$ in Millions)</u>	FY 2017	FY 2018	FY 2019
Title: Joint Service Provider (JSP)	0.768	-	-
Accomplishments/Planned Programs Subtotals	0.768	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

FY 2017: To achieve a 15% reduction in the time to deploy modifications, upgrades, and capabilities to customers.

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**Department of Defense
Fiscal Year (FY) 2019 Budget Estimates**

February 2018



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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Operational Test & Eval, Defense	188,654	184,666	184,666	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation	FY 2018	FY 2018	FY 2018	FY 2018	FY 2018
	Emergency Requests**	Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	Remaining Req Emergency	Total PB Requests* with CR Adj Base + OCO + Emergency**	Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs
Operational Test & Eval, Defense				187,391	187,391
Total Research, Development, Test & Evaluation				187,391	187,391

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Department of Defense
FY 2019 President's Budget
Exhibit R-1 FY 2019 President's Budget
Total Obligational Authority
(Dollars in Thousands)

26 Jan 2018

Appropriation -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Operational Test & Eval, Defense	221,009		221,009
Total Research, Development, Test & Evaluation	221,009		221,009

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					

Management Support	188,654	210,900	210,900		
Undistributed		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725
Summary Recap of FYDP Programs					

Research and Development	188,654	210,900	210,900		
Administration and Associated Activities		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----						
Management Support				210,900		210,900
Undistributed				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391
Summary Recap of FYDP Programs -----						
Research and Development				210,900		210,900
Administration and Associated Activities				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391

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Department of Defense
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support	221,009		221,009
Undistributed			
Total Research, Development, Test & Evaluation	221,009		221,009
Summary Recap of FYDP Programs -----			
Research and Development	221,009		221,009
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	221,009		221,009

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Defense-Wide
 FY 2019 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO
Summary Recap of Budget Activities					
Management Support	188,654	210,900	210,900		
Undistributed		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725
Summary Recap of FYDP Programs					
Research and Development	188,654	210,900	210,900		
Administration and Associated Activities		-26,234	-26,234	2,725	2,725
Total Research, Development, Test & Evaluation	188,654	184,666	184,666	2,725	2,725

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency
Summary Recap of Budget Activities -----						
Management Support				210,900		210,900
Undistributed				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391
Summary Recap of FYDP Programs -----						
Research and Development				210,900		210,900
Administration and Associated Activities				-23,509		-23,509
Total Research, Development, Test & Evaluation				187,391		187,391

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 Defense-Wide
 Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Summary Recap of Budget Activities -----	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Management Support	221,009		221,009
Undistributed			
Total Research, Development, Test & Evaluation	221,009		221,009
 Summary Recap of FYDP Programs -----			
Research and Development	221,009		221,009
Administration and Associated Activities			
Total Research, Development, Test & Evaluation	221,009		221,009

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2017 (Base + OCO)	FY 2018 PB Request with CR Adj Base	FY 2018 Total PB Requests* with CR Adj Base	FY 2018 PB Request with CR Adj OCO	FY 2018 Total PB Requests+ with CR Adj OCO	S e c
1	06051180	OTE Operational Test and Evaluation	06	80,772	83,503	83,503			U
2	06051310	OTE Live Fire Test and Evaluation	06	48,316	59,500	59,500			U
3	06058140	OTE Operational Test Activities and Analyses	06	59,566	67,897	67,897			U
		Management Support		188,654	210,900	210,900			
4	09015600	OTE Continuing Resolution Programs	20		-26,234	-26,234	2,725	2,725	U
		Undistributed			-26,234	-26,234	2,725	2,725	
Total Operational Test & Eval, Defense				188,654	184,666	184,666	2,725	2,725	

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element	Item	Act	FY 2018 Emergency Requests**	FY 2018 Less Enacted Div B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req Emergency	FY 2018 Total PB Requests* with CR Adj Base + OCO + Emergency**	FY 2018 Less Enacted DIV B P.L.115-96*** MDDE + Ship Repairs	FY 2018 Remaining Req with CR Adj Base + OCO + Emergency	S
1	06051180TE	Operational Test and Evaluation	06				83,503		83,503	U
2	06051310TE	Live Fire Test and Evaluation	06				59,500		59,500	U
3	06058140TE	Operational Test Activities and Analyses	06				67,897		67,897	U
		Management Support					210,900		210,900	
4	09015600TE	Continuing Resolution Programs	20				-23,509		-23,509	U
		Undistributed					-23,509		-23,509	
Total Operational Test & Eval, Defense							187,391		187,391	

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Defense-Wide
 FY 2019 President's Budget
 Exhibit R-1 FY 2019 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

26 Jan 2018

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Se c
1	0605118	OTE Operational Test and Evaluation	06	85,685		85,685	U
2	0605131	OTE Live Fire Test and Evaluation	06	64,332		64,332	U
3	0605814	OTE Operational Test Activities and Analyses	06	70,992		70,992	U
		Management Support		221,009		221,009	
4	0901560	OTE Continuing Resolution Programs	20				U
		Undistributed					
Total Operational Test & Eval, Defense				221,009		221,009	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	76.838	80.772	83.503	85.685	-	85.685	86.498	88.327	90.191	89.517	Continuing	Continuing
000310: <i>OT&E</i>	76.838	80.772	83.503	85.685	-	85.685	86.498	88.327	90.191	89.517	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Director of Operational Test and Evaluation (DOT&E) was created by Congress in 1983. The Director is responsible under Title 10 for policy and procedures for all aspects of Operational Test and Evaluation (OT&E) within the Department of Defense (DoD). Particular focus is given to OT&E that supports major weapon system production decisions for acquisition programs included on the Office of Secretary of Defense Test and Evaluation Oversight List that is prepared and approved annually. Generally, there are about 300 programs on the oversight list including all Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). MDAPs may not proceed beyond low-rate initial production (BLRIP) until OT&E of the program is complete. DOT&E is involved early in the planning phase of each program to ensure adequate testing is planned and executed. Key elements of DOT&E's oversight authority include:

- Approve component Test and Evaluation Master Plans (TEMPS).
- Approve component OT&E Test Plans (TPs).
- Oversee Military Department preparation and conduct of field operational tests; analysis and evaluation of the resultant test data; the assessment of the adequacy of the executed test and evaluation programs; and assessment of the operational effectiveness and suitability of the weapon systems.
- Report results of OT&E that supports BLRIP decisions to the Secretary of Defense and Congress, as well as providing an annual report summarizing all OT&E activities and the adequacy of test resources within DoD during the previous fiscal year.
- Review and make recommendations to the Secretary of Defense on all budgetary and financial matters related to OT&E, including operational test facilities, resources and ranges.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability (IA and IOP) of fielded systems and networks during major Combatant Command (CCMD) and Service exercises, and reports the trends and findings in the annual report.

DOT&E is also involved in increasing the capacity to access realistically advanced cyber warfare capabilities to keep pace with heightened demand for their capabilities, advancing technologies and the growing cyber threat.

This Program Element includes funds to obtain Federally Funded Research and Development Center (FFRDC) support in performing the described tasks, travel funds to carry out oversight of the OT&E and IA and IOP programs, funds for Service teams performing information assurance and interoperability assessments during exercises, administrative support services, DFAS support, and engineering and technical support services related to the conduct of operational test and evaluation and exercise assessments.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605118OTE / Operational Test and Evaluation (OT&E)
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	80.772	83.503	85.397	-	85.397
Current President's Budget	80.772	83.503	85.685	-	85.685
Total Adjustments	0.000	0.000	0.288	-	0.288
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Pricing adjustment due to inflation	-	-	0.288	-	0.288

Change Summary Explanation

Pricing adjustment due to inflation

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 000310 / <i>OT&E</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000310: <i>OT&E</i>	76.838	80.772	83.503	85.685	-	85.685	86.498	88.327	90.191	89.517	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Director of Operational Test and Evaluation (DOT&E) was created by Congress in 1983. The Director is responsible under Title 10 for policy and procedures for all aspects of Operational Test and Evaluation (OT&E) within the Department of Defense (DoD). Particular focus is given to OT&E that supports major weapon system production decisions for acquisition programs included on the Office of Secretary of Defense Test and Evaluation Oversight List that is prepared and approved annually. Generally, there are about 300 programs on the oversight list including all Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). MDAPs may not proceed beyond low-rate initial production (BLRIP) until OT&E of the program is complete. DOT&E is involved early in the planning phase of each program to ensure adequate testing is planned and executed. Key elements of DOT&E's oversight authority include:

- The approval of component Test and Evaluation Master Plans (TEMPS).
- The approval of component OT&E Test Plans (TPs).
- Oversight of Military Department preparation and conduct of field operational tests; analysis and evaluation of the resultant test data; the assessment of the adequacy of the executed test and evaluation programs; and assessment of the operational effectiveness and suitability of the weapon systems.
- Reporting results of OT&E that support BLRIP decisions to the Secretary of Defense and Congress, as well as providing an annual report summarizing all OT&E activities and the adequacy of test resources within DoD during the previous fiscal year.
- The review and make recommendations to the Secretary of Defense on all budgetary and financial matters related to OT&E, including operational test facilities, resources and ranges.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability (IA and IOP) of fielded systems and networks during major Combatant Command (CCMD) and Service exercises, and reports the trends and findings in the annual report.

DOT&E is also involved in increasing the capacity to access realistically advanced cyber warfighting capabilities to keep pace with heightened demand for those capabilities, advancing technologies and the growing cyber threat.

This Program Element includes funds to obtain Federally Funded Research and Development Center (FFRDC) support in performing the described tasks, travel funds to carry out oversight of the OT&E and IA and IOP programs, funds for Service teams performing information assurance and interoperability assessments during exercises, administrative support services, DFAS support, and engineering and technical support services related to the conduct of operational test and evaluation and exercise assessments.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense	Date: February 2018
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Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 000310 / <i>OT&E</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
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<p>Title: Operational Test and Evaluation</p> <p>FY 2018 Plans: Operational Test and Evaluation Oversight</p> <p>This effort is in direct support of the Director’s Title 10 responsibilities and is a continuing effort. Funding for FY 2018 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2018 Office of the Secretary of Defense Test and Evaluation Oversight List.</p> <p>Cybersecurity Evaluations</p> <p>DOT&E plans to sponsor approximately 25 Combatant Command (CCMD) and Service cybersecurity assessments and Cyber readiness Campaigns (CRCs) in FY 2018, each including “Find-Fix-Verify” efforts as described above. DOT&E plans to continue working with the CCMDs and Services to develop multiyear plans for exercise cyber assessments and CRC events. These plans will focus on assessing the CCMD’s or Service’s ability to complete missions in a contested cyber environment. To support threat-representative assessments, and to facilitate improvement of DoD’s cybersecurity posture, DOT&E will continue efforts with U.S. Cyber Command to establish a Global Persistent Cyber Opposition Force (PCO) capability with authorities to perform year-round and long-duration assessments of all CCMDs and Services. Primary objectives for DOT&E’s assessments in FY 2018 include the portrayal of advanced nation-state cyber threats and the assessment of operational missions during realistic cyber attacks. DOT&E will assess Cyber Protection Teams when they participate during PCO, CRC, or exercise events. DOT&E will continue to develop techniques to efficiently and effectively assess offensive cyber capabilities, conduct timely evaluations of these capabilities, and fund joint assessments of Mode 5 Identification of Friend or Foe capabilities in support of acquisition programs. DOT&E will transmit critical findings to DoD leadership along with recommended actions to improve DoD’s cybersecurity posture. FY 2018 evaluations will include trend analyses across prior year results, both within and across CCMDs.</p> <p>FY 2019 Plans: Operational Test and Evaluation Oversight</p> <p>This effort is in direct support of the Director’s Title 10 responsibilities and is a continuing effort. Funding for FY 2019 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2019 Office of the Secretary of Defense Test and Evaluation Oversight List.</p>	80.772	83.503	85.685
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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 000310 / <i>OT&E</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>Cyber Evaluations</p> <p>OSD-mandated staff reductions planned for FY2019 will require DOT&E to reduce the number of planned assessments in FY2019 and beyond. Each assessment will continue to include “Find-Fix-Verify” efforts as described above. DOT&E plans to continue working with the CCMDs and Services to develop multiyear plans for exercise cyber assessments and CRC events. These plans will focus on assessing the CCMD’s or Service’s ability to complete missions and be resilient in a contested cyber environment. DOT&E will perform year-round and long-duration assessments of all CCMDs and Services with Global PCO authorities. Objectives for DOT&E assessments in FY 2019 will include the portrayal of advanced nation-state cyber threats and the assessment of operational missions during realistic cyber attacks, with supporting offensive fires and cyber-range events included in the evaluation. DOT&E will assess Cyber Protection Teams when they participate during PCO, CRC, or exercise events. DOT&E will continue assessments of offensive cyber capabilities, consider the development of a potential cyber variant of the Joint Munition Effectiveness Manual, and continue to fund joint assessments of Mode 5 Identification of Friend or Foe capabilities in support of acquisition programs. DOT&E will transmit critical findings to DoD leadership along with recommended actions to improve DoD’s cybersecurity posture. FY 2019 evaluations will include trend analyses across prior year results, both within and across CCMDs.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 of \$2.182 Million is consistent with yearly inflation increases of program cost.</p>			
Accomplishments/Planned Programs Subtotals	80.772	83.503	85.685

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Performance Measure: Percentage of required operational test planning documents, assessments, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time. The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. Products included in the measure include beyond low-rate initial production reports, Test Plans, and Test and Evaluation Master Plans for operational test and evaluation oversight as well as assessment plans, “quick look” reports, and final reports for the information assurance and interoperability testing associated with scheduled test events.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	46.882	48.316	59.500	64.332	-	64.332	58.781	61.646	59.806	57.998	Continuing	Continuing
000311: <i>LFT&E</i>	46.882	48.316	59.500	64.332	-	64.332	58.781	61.646	59.806	57.998	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP), and Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Life Cycle Management Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E.

The Joint Logistics Commanders Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTTCG/ME authenticates weapons effectiveness data for use in training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>
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learned (Enduring Freedom, Iraqi Freedom, Odyssey Dawn and Inherent Resolve) and the needs of Combatant Commands, Services, Military Targeting Committee, and Operational Users Working Groups input for specific weapon-target pairings and methodologies.

This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	48.316	59.500	62.962	-	62.962
Current President's Budget	48.316	59.500	64.332	-	64.332
Total Adjustments	0.000	0.000	1.370	-	1.370
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Battle Damage Assessment (BDA)	-	-	1.370	-	1.370

Change Summary Explanation

Battle Damage Assessment (BDA) enhancement offers updates to warfighter's Joint Munitions Effectiveness Manual (JMEM) Weaponering System (JWS) intended to ensure effective and efficient munition expenditure rates and mitigate the stockpile stress while improving Combatant Commands' force effects. The enhancement will improve the warfighter's ability to get the right weapon on the right target, achieve the desired effect, and minimize collateral damage while optimizing scarce resources.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000311: <i>LFT&E</i>	46.882	48.316	59.500	64.332	-	64.332	58.781	61.646	59.806	57.998	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP) and Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense (OSD) charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Life Cycle Management Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E.

The Joint Logistics Commanders' Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTTCG/ME authenticates weapons effectiveness data for use in training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense	Date: February 2018
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Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>
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learned (Enduring Freedom, Iraqi Freedom, Odyssey Dawn and Inherent Resolve) and the needs of Combatant Commands (CCMDs), Services, Military Targeting Committee, and Operational Users Working Groups (OUWG) input for specific weapon-target pairings and methodologies.

This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>Title: Live Fire Test and Evaluation</p> <p>FY 2018 Plans: Live Fire Test and Evaluation (LFT&E) of Major Department of Defense (DOD) Acquisition Programs The FY 2018 budget will enable the LFT&E Deputate to: (1) assess the adequacy of programs' test and evaluation plans and reports and generate new test and evaluation policies, as needed; (2) review and analyze the test data to support an independent evaluation of the survivability/lethality of the systems in support of the development of OSD Live Fire Test and Evaluation reports to Congress; and (3) review major acquisition plans, reports, and requirement documents to inform system design and capability development.</p> <p>JLF Programs and LFT&E Initiatives The FY 2018 JLF budget will support at least 23 projects (tentatively 13 new starts and 10 projects continuing from previous FYs). Focus areas for JLF include projects that either: (1) characterize new survivability issues; (2) characterize new lethality issues; (3) improve accuracy and fidelity of weapon data; (4) improve test methods; (5) improve modeling and simulation methods; or (6) develop vulnerability data libraries for emerging non-kinetic threats.</p> <p>JLF Air projects will continue to evaluate technologies and techniques to decrease vulnerabilities of aircraft against operationally relevant threats. Previously initiated projects that will be continued include developing a model for the OG-7V fragmentation grenade, quantifying the penetration of armor piercing incendiary munitions as a function of yaw, evaluating the effectiveness of CV-22 Wing Fire Protection Systems, determining the root cause of CH-53 and CH-47 self-sealing bladder performance issues, measuring flammability traits of AH-64E Fire Detection Expansion Systems, and developing a 12.7 x 108 mm Heat (High) Explosive Incendiary threat model prediction. Several new efforts will be initiated to (1) assess the vulnerability of H-60 rotor craft accumulators; (2) determine methodology to properly model multi-fragment vulnerability; and (3) determine how to better assess the performance/vulnerability of rotor craft shafts.</p> <p>JLF Ground projects will continue to measure the effects of munition fragments on concrete masonry units, as well as continue to develop the instrumented inert threat system for Active Protection System evaluation. Two new efforts will be initiated to develop better test methodologies: (1) determine the most appropriate surrogate for the TM-62 mine for U.S. system vulnerability studies; and (2) develop improved methods of measuring blast effects within confined spaces. One effort will evaluate the lethality of U.S.</p>	48.316	59.500	64.332

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>munitions against emerging foreign body armors. Finally, three efforts will kick-off to improve M&S capability: (1) one effort will concentrate on improving (reducing) the uncertainty in predictions yielded by AJEM/MUVES; (2) one effort will validate/collect data to more precisely represent fragment penetration; and (3) one effort will improve the modeling of behind armor debris that occurs when a munition penetrates thick armor.</p> <p>JLF Sea projects will continue FY17 work initiated to properly characterize bubble jetting as well as multi-cycle underwater explosion effects. New projects will initiate in FY18 to (1) develop a penetration model for an emerging foreign shaped charge warhead threat; (2) evaluate the effectiveness of fire insulation after it has been exposed to various degrees of physical damage; and (3) develop M&S tools for naval system fragility as a function of both fire and blast.</p> <p>JASP</p> <p>In FY 2018 the JASP will continue work on at least 29 multi-year RDT&E projects and initiate 4 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will develop measures to defeat Near-Peer Adversary Threat (N-PAT) radio-frequency and infrared guided threats coupled with quantifiable improvements in digital and hardware in the loop modeling and simulation capability and credibility. Improve aircraft force protection by increasing threat and flight environmental situational awareness, hostile fire identification, and degraded visual environment flight capabilities; advancing system hardening against ballistic and high energy laser threats; and improving aircraft crashworthiness. Improve aircraft survivability to fire by increasing the speed and efficiency of fire detection and suppression systems and the accuracy and confidence in prediction of threat initiated fires onboard aircraft. The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness</p> <p>In FY18, JTCG/ME will continue to develop and standardize methodologies for evaluating munitions effectiveness. This includes target vulnerability characterization, munitions lethality, weapon system accuracy, and specific weapon-target pairings driven primarily from current operational lessons learned, Joint Staff Data Calls, and CCMDs' needs.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>JTCG/ME will deploy and continue to enhance future versions of its major JTCG/ME Joint Munitions Effectiveness Manual (JMEM) products, the JMEM Weaponizing System (JWS), Joint Antiair Combat Effectiveness (J-ACE), Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) tool, and the Digital Imagery Exploitation Engine (DIEE). JTCG/ME will continue to progress and develop non-kinetic JMEM capability, as well as support specialized solutions to address operational needs to include direct analytical support to operations, Probability of kill (Pk) Lookup Tools, Collateral Damage Estimation (CDE) analysis and tables, and munitions weaponizing guides. The objective is to provide efficient and effective support to meet CCMD current and future needs for agility in a dynamic operational environment.</p> <p>Since JTCG/ME products are User focused and requirements driven, JTCG/ME will continue to maintain and strengthen relationships with the Warfighter, operational users, and coalition partners to establish requirements for current and future products. Efforts will include forums, training, foreign military sales, and day-to-day operational support.</p> <p>In FY 2018, JTCG plans to:</p> <ul style="list-style-type: none"> - Field JWS v2.3 that will include enhanced data sets and capabilities with a focus on connectivity to other targeting and mission planning capabilities for improved estimates and seamless planning. Specifically, JWS v2.3 will include connectivity to MIDB, JTT, and DIEE; updates to Fast Integrated Structural Tool (FIST) and Ship Weaponizing Estimation Tool (SWET), updated weapons characteristics and delivery accuracy, more target vulnerability data sets. - Finalize development of JWS v2.4, which will provide enhanced data and connectivity capabilities, while maximizing the final JWS v2.x product line and allowing development of JWS v3.x. JWS v2.4 will be a database driven product with enhanced business logic and user interfaces, allowing for accelerated weapons and target data updates, tailored product versions for releasability, and more effective, focused testing. Capabilities will include updated weapons and targets and FIST v2.1 with inclusion and updates to WinBlast, Bridge Analysis System, Linear Target Module, and surface response and penetration functions in burst point editor. These capabilities will enable more options to the Weaponizer and improve the underlying phenomenology representation in JWS. - Continue development on the next JWS series (JWS v3.x). JTCG/ME will leverage the JWS v3.x Capability Needs Statement (CNS) completed in FY17 to progress towards initial capability. Specific efforts will include requirements analysis/decomposition, functionality/methodology review and gap analysis, development plan finalization, and endgame framework road mapping. - Support current use and future development requirements, by hosting and supporting JWS training sessions, Operational Users Working Groups (OUWG), and User help via the JMEM Product Information Access System (JPIAS) and JWS newsletter. The training sessions allow users to optimize use of JWS capabilities, while providing JTCG/ME with critical input on Warfighter use for future development. OUWGs are critical venues for receiving direct User feedback and development of future requirements from the operational community in regards to needed software enhancements and capabilities to support Air to Surface (AS) and Surface to Surface (SS). 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to facilitate coalition interoperability and information exchange forums, by delivering JWS version releases and standalone Pk Lookup tools to key coalition partners in support of current operations under Foreign Military Sales agreements. This capability improves the effectiveness of U.S. fires and targeting personnel working in combined environments. - Continue to maintain and enhance the Collateral Effects Library (CEL) tool in support of advanced CDE mitigation techniques. JTTCG/ME will leverage CEL, along with other high fidelity techniques to deliver collateral damage mitigation analysis and tables to operational Users for high value targets and current operational planning. These efforts directly assist Combatant Commands to meet commander's intent and minimize collateral damage. - Initiate multiyear plan, developed in FY17, to enhance and validate collateral damage. The enhancement will support improvements in weaponeering methodology to minimize risk to mission and risk to forces, while not increasing risk of collateral damage by providing foundational data for the development of higher fidelity predictive tools. Specific efforts will generate buried ordnance characterization data based upon usage statistics from CCMD Expenditure reports, and AOR specific building debris data to enhance and validate current weaponeering/collateral damage estimation methodologies required by Strike Approval Authorities to make their strike decision calls. The FY18 efforts build off three FY17 JLF testing events and multiple collaboration forums. - Field DICE v2.1 that will include user requested enhancements, JWS interface, updated CGS for PPM capability, JTT read/write capability, CEL interface development, as well as additional supported image and layer management formatting. - Continue to develop future DICE versions (v2.2), which will include 3-D viewer capability and updates to connectivity interfaces. - Continue to support the CJCSI 3160.01, by updating and accrediting CER Reference Tables for Air-to-Surface (AS) and surface-to-surface (SS) weapons, which are the basic data that support the CDE methodology. The CER tables and CDE methodology are used in every planned kinetic strike in all Areas of Responsibility (AORs) to meet Commanders' intent and to minimize civilian casualties. As such, it is critical to the Warfighters ability to meet urgent operational needs. DCiDE tool implements the latest CER and CDE methodology. DCiDE is an accredited and automated CDE tool that expedites and simplifies the CDE process and is interconnected with DICE. - Continue to provide direct forward presence support to CCMDs, which enabled target materiel development, weaponeering and CDE solution development. - Sustain DCiDE and DICE training sessions for the Warfighter. - Sustain/support fielded J-ACE v5.3. Efforts will include multiple training and user forums for the fielded product. These forums are pivotal for J-ACE developers to understand requirements and align development with other external debrief and analytical capabilities that use J-ACE as the underlying analytical engine to underpin results. Many users leverage J-ACE's API to link debrief and analysis tools at training and test ranges across the Joint community. The forums allows J-ACE external application developers to receive an updates and interact with J-ACE developer to refine requirements and plans. - Continue development and finalization of J-ACE v5.4, with expected fielding in FY19. J-ACE v5.4 fielding will include an enhanced BROWSE module for descriptive material to support new weapons in the JAAM and Endgame Manager. In addition, it will facilitate greater connectivity for debrief capabilities, include initial capability to evaluate two sided SEAD/DEAD, target 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>detection estimation by leveraging NASIC RF models, and increased counter air defense prediction with greater Enhanced Surface-to-Air Missile Simulation (ESAMS) capability. An enhanced architecture will maximize re-use, interoperability, support future hardware/software compatibility, and optimize integration and validation testing.</p> <ul style="list-style-type: none"> - Develop next J-ACE version series by finalizing requirements and implementing initial capabilities for rotary wing aircraft, as well increasing capability for SEAD/DEAD, electronic warfare, and counter-measures. - Continue to develop J-NKE as the single source for operational Warfighters, analysts, targeteers, and planners to analyze offensive cyber capabilities and directed energy effectiveness. Specifically: <ul style="list-style-type: none"> -- Execute a multiyear plan to build a Cyber JMEM capability to include standardization of data to address weapon characterization, target vulnerability, Operational Environment, and Uncertainty Metrics for the Cyber Operation Lethality and Effectiveness (COLE) tool. Efforts will include solidifying relationships with key stakeholders, framework development, initial network modeling, standardize weapons and target characterization, codify/develop operational environment model, and determine uncertainty metrics and data standards. -- Continue multiyear plan to build develop directed energy effectiveness estimate capability. JTCG/ME will leverage the FY18/19 Joint Test Project, JLaSE, to provide lessons learned, data, and build initial capabilities. Results of the JLaSE program will provide Joint Fire Support Planners and Targeteers the tactics, techniques, and procedures for Joint Targeting Cycle, Capabilities Analysis – Weaponneering and Collateral Damage Estimation, to adequately plan for and execute Directed Energy Laser Weapons in the joint battlespace. In this way, the JTCG/ME and JLaSE partnership will help facilitate data standards, methodology standards, and working relations imperative in the fruition of a DE effectiveness, weaponneering, and CDE solution for the Warfighter. FY18 outcomes will include standards and requirements to facilitate building of initial methodologies in FY19. <p>FY 2019 Plans: Live Fire Test and Evaluation (LFT&E) of Major Department of Defense (DOD) Acquisition Programs The FY 2018 budget will enable the LFT&E Deputate to: (1) assess the adequacy of programs’ test and evaluation plans and reports and generate new test and evaluation policies, as needed; (2) review and analyze the test data to support an independent evaluation of the survivability/lethality of the systems in support of the development of OSD Live Fire Test and Evaluation reports to Congress; and (3) review major acquisition plans, reports, and requirement documents to inform system design and capability development.</p> <p>JLF Programs and LFT&E Initiatives The FY 2019 budget will support the planning and execution of tests of fielded systems not previously tested under the Live Fire Programs to support DOT&E and operator needs. New threats, missions, TTPs, and combat environments will create the need for these tests and an assessment of performance. JLF projects will be defined, planned, and executed to provide survivability and lethality data on currently fielded U.S. systems; improve modeling and simulation tools; develop vulnerability data libraries for emerging threats; and initiate responses to quick reaction requests from theater.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>JASP</p> <p>In FY 2019 the JASP will continue work on at least 20 multi-year RDT&E projects and initiate about 8 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will develop measures to defeat Near-Peer Adversary Threat (N-PAT) radio-frequency and infrared guided threats coupled with quantifiable improvements in digital and hardware in the loop modeling and simulation capability and credibility. Improve aircraft force protection by increasing threat and flight environmental situational awareness, hostile fire identification, and degraded visual environment flight capabilities; advancing system hardening against ballistic and high energy laser threats; and improving aircraft crashworthiness. Improve aircraft survivability to fire by increasing the speed and efficiency of fire detection and suppression systems and the accuracy and confidence in prediction of threat initiated fires onboard aircraft.</p> <p>The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E.</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness</p> <p>In FY19, JTCG/ME will continue to develop and standardize methodologies for evaluating munitions effectiveness, including target vulnerability characterization, munitions lethality, weapon system accuracy, and specific weapon-target pairings driven primarily from current operational lessons learned, Joint Staff Data Calls, and CCMD needs.</p> <p>JTCG/ME will deploy and continue to enhance future versions of its major JMEM products, JWS, J-ACE, DCiDE, and DIEE. This will continue initial capabilities for its future product line architectures that will allow optimal leveraging and flexibility for agile enhancements, imperative in a complex strategic and operational environment. It will progress to greater maturity of Cyber and DE standards and J-NKE capability realization. In addition, it will continue to make the Warfighter the focal point, by providing specialized solutions and direct analytical support to provide efficient and effective support to meet CCMD current and future needs for agility in a dynamic operational environment.</p> <p>In FY2019, JTCG plans to:</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Field JWS v2.4, which will provide enhanced data and connectivity capabilities, while maximizing the final JWS v2.x product line as JWS v3.x capabilities mature. It will be a database driven product, enhancing business logic and user interfaces. This will allow for accelerated weapons and target data updates, tailored product versions for releasability, and more effective, focused testing. Specific capabilities will include updated weapon and target data sets and enhanced FIST v2.1, to include WinBlast, Bridge Analysis System, Linear Target Module, and surface response and penetration functions in burst point editor. These capabilities will enable more options to the Weaponer and improve the underlying phenomenology representation in JWS. - Mature the JWS v3.x product line, building upon FY18 efforts to solidify detailed requirements, functionality, methodology, gaps, and acquisition plans. FY19 efforts will include implementation of FY18 efforts and findings to progress towards initial prototypes and engineering builds in endgame framework, with planned fielding of initial capabilities in 2020. - Support current use and future development requirements, by hosting and supporting JWS training sessions, OUWG, and User help desk support via the JPIAS and JWS newsletter. The training sessions allows users to optimize use of JWS capabilities, while providing JTCG/ME with critical input on Warfighter use for future development. OUWGs are critical venues for receiving direct User feedback and development of future requirements from the operational community in regards to needed software enhancements and capabilities to support AS and SS. - Continue to facilitate coalition interoperability and information exchange forums, by delivering JWS version releases and standalone Pk Lookup tools to key coalition partners in support of current operations under Foreign Military Sales agreements. This capability improves the effectiveness of U.S. fires and targeting personnel working in combined environments. - Continue to support the CJCSI 3160.01, by updating and accrediting CER Reference Tables for AS and SS weapons, which are the basic data that support the CDE methodology. The CER tables and CDE methodology are used in every planned kinetic strike in all AORs to meet Commanders' intent and to minimize civilian casualties. As such, it is critical to the Warfighters ability to meet urgent operational needs. DCiDE tool implements the latest CER and CDE methodology. DCiDE is an accredited and automated CDE tool that expedites and simplifies the CDE process and is interconnected with DIEE. - Field DIEE v2.2, which will include 3-D viewer capability, updates to connectivity interfaces, and greater format flexibility, while maintaining Warfighter support and future requirements through training and User forums. - Continue to execute multiyear plan to enhance and validate collateral damage. The enhancement will support improvements in weaponeering methodology to minimize risk to mission and risk to forces while not increasing risk of collateral damage by providing foundational data for the development of higher fidelity predictive tools. Specific efforts will generate buried ordnance characterization data based upon usage statistics from CCMD Expenditure reports, and AOR specific building debris data to enhance and validate current weaponeering/collateral damage estimation methodologies required by Strike Approval Authorities to make their strike decision calls. - Field J-ACE v5.4 that will include an enhanced BROWSE module for descriptive material to support new weapons in the JAAM and Endgame Manager. In addition, it will facilitate greater connectivity for debrief capabilities, target detection estimation with NASIC RF modeling, counter air defense prediction with greater ESAMS capability, and enhanced architecture to maximize re-use, interoperability, support future hardware/software compatibility, and optimize integration and validation testing. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 000311 / <i>LFT&E</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>- Develop the next J-ACE version that will include rotary wing aircraft, as well increasing capability for SEAD/DEAD electronic warfare, and counter-measures.</p> <p>- Continue to support and interact with the User base thru training and User/External Interface working group forums. These forums are pivotal for J-ACE developers to understand requirements and align development with other external debrief and analytical capabilities that use J-ACE as the underlying analytical engine to underpin results. Many users leverage J-ACE API to link debrief and analysis tools at training and test ranges across the joint community. The EIWG meeting allows J-ACE external application developers to receive an updates and interact with J-ACE developer to refine requirements and plans.</p> <p>- Continue to develop J-NKE as the single source for operational Warfighters, analysts, targeteers, and planners to analyze offensive cyber capabilities and directed energy effectiveness. Specifically:</p> <p>-- Mature Cyber JMEM capabilities with continued execution of multiyear plan. FY19 efforts will build upon FY18 efforts. Specific planned efforts include maintaining User community interaction and stakeholder partnerships, refining weapon/target standards, initial COLE capabilities, initial User beta testing, and integration of uncertainty analytics.</p> <p>-- Mature DE effectiveness capabilities with continued execution of multiyear plan. FY19 efforts will build upon FY18 outcomes, while continuing the work and leveraging of the FY18/19 Joint Test Project, JLaSE. Leveraging and cooperation between JTCCG/ME and JLaSE will facilitate lessons learned, data standards, methodology standards, and working relations imperative in the fruition of a DE effectiveness, weaponing, and CDE solution for the Warfighter. FY19 outcomes will include initial prototype and methodologies for DE effectiveness estimation.</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i> The increase from FY 2018 to FY 2019 of \$4.832 Million is consistent with inflation, planned program increases in collateral damage methodology improvements for buried ordinance characterization, and planned program increases for Battle Damage Assessment (BDA) an enhancement that offers updates to warfighter's Joint Munitions Effectiveness Manual (JMEM) Weaponing System (JWS) intended to ensure effective and efficient munition expenditure rates and mitigate the stockpile stress while improving Combatant Commands' force effects.</p>			
Accomplishments/Planned Programs Subtotals	48.316	59.500	64.332

C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
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E. Performance Metrics

(U) Performance Measure: Percentage of required live fire test planning documents, assessments, munition effectiveness manuals, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time. Percentage of required products, such as test planning documents, munitions effectiveness manuals, tactic-techniques and reports that are developed and delivered to program managers and customers on time.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	63.763	59.566	67.897	70.992	-	70.992	59.650	59.748	61.443	54.121	Continuing	Continuing
000920: <i>OTA&A</i>	63.763	59.566	67.897	70.992	-	70.992	59.650	59.748	61.443	54.121	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and Center for Countermeasures (CCM).

Joint Test and Evaluation projects are test and evaluation activities conducted in a joint military environment that develop process improvements. These multi-Service projects, chartered by the Office of the Secretary of Defense and coordinated with the Joint Staff, appropriate combatant commanders, and the Services, provide non-materiel solutions that improve: joint interoperability of Service systems, technical and operational concepts, joint operational issues, development and validation of joint test methodologies, and test data for validating models, simulations, and test beds. The JT&E projects address relevant joint war fighting issues in a joint test and evaluation environment by developing and providing new tactics, techniques, and procedures to improve joint capabilities and methodologies.

Threat Systems, based on a memorandum of agreement between the Director, Operational Test and Evaluation (DOT&E) and the Defense Intelligence Agency, provides DOT&E support in the areas of threat resource analysis, intelligence support and threat systems investments. Threat Systems provides threat resource analyses on the availability, capabilities and limitations of threat representations (threat simulators, targets, models, U.S. surrogates and foreign materiel) and analysis of test resources used for operational testing to support DOT&E's assessment of the adequacy of testing for those programs designated for oversight by DOT&E and the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. Threat Systems provides DOT&E assessment officers and other DOT&E activities with program specific threat intelligence support. Threat Systems also funds management, oversight, and development of common-use threat specifications for threat simulators, threat representative targets, and digital threat models used for test and evaluation.

The Center, a Joint Service Countermeasure (CM) T&E Activity, directs, coordinates, supports, and conducts independent countermeasure/counter-countermeasure (CCM) T&E activities of U.S. and foreign weapon systems, subsystems, sensors, and related components. The Center accomplishes this work in support of DOT&E, Deputy Assistant Secretary of Defense (DASD) for Developmental Test and Evaluation (DT&E), weapon system developers, and the Services. The Center's testing and analyses directly supports operational effectiveness and suitability evaluations of CM/CCM systems, such as missile warning and aircraft survivability equipment (ASE), used on rotary-wing and fixed-wing aircraft. The Center develops unique CM/CCM test equipment to support testing in operationally realistic environments. The Center determines effectiveness of precision guided weapon (PGW) systems and subsystems when operating in an environment degraded by CMs. Analysis and recommendations on CM/CCM effectiveness are provided to Service Program Offices, DOT&E, DASD (DT&E), and the Services. The Center also supports Service member exercises, training, and pre-deployment activities with expertise on CM/CCM technology and capabilities.

This Program Element includes funds to obtain Federally Funded Research and Development support and travel funds.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>
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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	52.631	67.897	63.641	-	63.641
Current President's Budget	59.566	67.897	70.992	-	70.992
Total Adjustments	6.935	0.000	7.351	-	7.351
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-1.065	-			
• Congressional Rescissions	-	-			
• Congressional Adds	8.000	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Joint Standard Instrumentation Suite (JSIS) Full Operational Capability	-	-	7.351	-	7.351

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 000920: *OTA&A*

Congressional Add: *Threat Resource Analysis*

Congressional Add Subtotals for Project: 000920

Congressional Add Totals for all Projects

	FY 2017	FY 2018
	8.000	-
	8.000	-
	8.000	-

Change Summary Explanation

FY 2017 reduction of \$1.065 was congressional directed FFRDC reduction.

FY 2017 Congressional Add was for, "Program increase - threat resource analysis".

FY 2019 change for Joint Standard Instrumentation Suite (JSIS) Full Operational Capability provides threat measurement capabilities necessary for test and evaluation modelling and simulation. This enhancement provides an integrated suite of radiometric instruments along with related equipment to measure and record threat munitions signatures, Time Space Position Information (TSPI), and other ground truth data.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	Project (Number/Name) 000920 / <i>OTA&A</i>
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COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
000920: <i>OTA&A</i>	63.763	59.566	67.897	70.992	-	70.992	59.650	59.748	61.443	54.121	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and, the Center for Countermeasures (CCM).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
Title: Operational Test Activities and Analyses	51.566	67.897	70.992
FY 2018 Plans: Joint Test and Evaluation (JT&E)			
In FY 2018, JT&E plans to close one project that was started in FY 2016. The Digitally Aided Close Air Support Joint Test is anticipated to close in May 2018. It is developing and testing procedures so Joint Terminal Attack Controllers, Joint Fires Observers, and Close Air Support aircrew can realize the advantage of digital communications, including shared situational awareness, increased confidence prior to weapons release, and improved kill chain timeliness. Two projects that started in FY 2017 will continue through FY 2018. Four new feasibility studies are expected to be conducted in FY 2018 of which two will be selected to conduct joint tests.			
Threat Systems			
FY 2018, Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions based on the availability of funding. Threat Systems will: - Provide intelligence support to DOT&E staff to address specific questions on threat systems affecting programs on the OSD T&E Oversight list and provide briefings and special intelligence reports when necessary. - Provide DOT&E representative support at the Threat Steering Group (TSG) in the transitioning of the System Threat Assessment Reports (STARS) to the new Validated Online Lifecycle Threat (VOLT) report process. - Continue to represent DOT&E interests on Acquisition/Intelligence/ Requirement Task Force (AIRTF) and Executive Steering Group (AIRESG) and provide access to the Intelligence Mission Data Management Analysis & Reporting System (IMARS).			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Support the US warfighter by providing threat intelligence to ensure operational and developmental testing occurs against realistic threat representations. - Sustain and manage threat M&S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&E facilities and distributing performance and signature models to T&E users. - Review validation reports to independently ensure that correct threat data and critical parameters are presented in the report to assessment the threat representation’s capabilities to replicate a real world threat system. - Continue identifying initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems, representative threat offensive and defensive cyber operations capabilities, and scalable cyberspace threat test environments that can interface with cyber test networks. - Manage Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) efforts supporting programs on the OSD T&E Oversight List by conducting intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets. - Initiate new ITEAMS efforts leading to the development of new threat systems for T&E. - Represent DOT&E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&E needs for foreign material, coordinate service requirements, and de-conflict and prioritize foreign material requirements for T&E. - Represent DOT&E at the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition. - Oversee legacy DOT&E investments and continue management and oversight of legacy and new Test Resource Management Center-funded threat system investments. <p>Threat Systems continues its efforts to maintain a standard set of threat performance models. These activities help DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p> <p>The Center</p> <p>The Center has received 46 requests for support during FY18, which exceeds our support capacity. The Center will assess the requests based on priority and schedule. The Center will test, analyze, and report on more than 30 systems/platforms, with emphasis on rotary wing survivability. High priority test events will receive an independent assessment of our data/findings for CM/CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<p>The Center will continue to conduct ongoing investigations towards determining and filling the gaps in EW and multimode system testing. In addition to these test activities, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused tactics, techniques and procedures (TTP) development. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities.</p> <p>The Center will complete the initial development of the RLS turret upgrade, which will be used in support of testing for both Title 10 programs and ASE urgent operational needs. The Center will continue to improve and expand the JSIS to meet program data collection requirements. Also, emitter upgrades are planned for the missile plume simulators to better replicate threat missile launches. The Center will provide expertise to many organizations including program offices and other T&E agencies. The Center will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, JCMT&E WG, and JCMT&E WG HFI subgroup lead.</p> <p>FY 2019 Plans: Joint Test and Evaluation (JT&E)</p> <p>In FY 2019, JT&E plans to close one project that was started in FY 2016 and two projects that were started in FY 2017. The first is the Joint Counterair Integration Joint Test, which is anticipated to close in November 2018. It is developing and testing TTP for counterair shooter and C2 operators to effectively integrate joint defensive counterair resources in a contested, degraded, and operationally limited environment to protect defended assets from expected threats. The other project expected to close in FY 2019 is the Joint Cyber Insider Threat Joint Test, which is anticipated to close in November 2018. It is developing and testing procedures to proactively detect and respond to cyber insider threats before they have an adverse impact on military operations. Two projects that will start in FY 2018 will continue through FY 2019. Four new feasibility studies are expected to be conducted in FY 2019 of which two will be selected to conduct joint tests.</p> <p>Threat Systems</p> <p>In FY 2019, Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions based on the availability of funding. Threat Systems will:</p> <ul style="list-style-type: none"> - Continue to provide intelligence support to DOT&E staff to address specific questions on threat systems affecting programs on the OSD T&E Oversight list and provide briefings and special intelligence reports when necessary. - Continue providing DOT&E representative support at the Threat Steering Group (TSG) in the transitioning of the System Threat Assessment Reports (STARS) to the new Validated Online Lifecycle Threat (VOLT) Report process. 			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense		Date: February 2018
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Continue to represent DOT&E interests on Acquisition/Intelligence/ Requirement Task Force (AIRTF) and Executive Steering Group (AIRESG) and provide access to the Intelligence Mission Data Management Analysis & Reporting System (IMARS). - Continue identifying initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems, and scalable cyberspace threat test environments that can interface with cyber test networks. - Continue identifying initiatives to conduct offensive cyber operations (OCO) and defensive cyber operations (DCO) without significantly impacting critical operational capabilities. - Continue initiatives to improve satellite and space threat representations. - Support the US warfighter by providing threat intelligence to ensure operational and developmental testing occurs against realistic threat representations. - Sustain and manage threat M&S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&E facilities and distributing performance and signature models to T&E users. - Manage Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) efforts supporting programs on the OSD Oversight T&E List by conducting intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets. - Represent DOT&E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&E needs for foreign material, coordinate service requirements, and de-conflict and prioritize foreign material requirements for T&E. - Review validation reports to independently ensure that correct threat data and critical parameters are presented in the report to assessment the threat representation’s capabilities to replicate a real world threat system. - Represent DOT&E at the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition. - Oversee legacy DOT&E investments and continue management and oversight of legacy and new Test Resource Management Center-funded threat system investments. - Continue ITEAMS efforts leading to the development of new threat systems for T&E. <p>Threat Systems will continue its efforts to maintain a standard set of threat performance models. These activities help DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p> <p>The Center</p> <p>The Center will test, analyze, and report on more than 30 systems/platforms, with special emphasis on aircraft survivability, CM/CCM employment, warning and targeting systems, and PGWs. High priority programs will receive an independent assessment</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>of our data/findings for CM/ CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives. Furthermore, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused TTP development. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities.</p> <p>The Center will continue Improvement and Modernization (I&M) efforts to improve T&E capabilities. The Center plans to continue upgrades to the JSIS system and missile plume simulator emitters.</p> <p>The Center will provide expertise to many organizations including program offices and other T&E agencies. The Center will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, JCMT&E WG, and JCMT&E WG HFI subprogram lead.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: The increase from FY 2018 to FY 2019 of \$3.095 Million is consistent with planned program increases in Joint Standard Instrumentation Suite (JSIS), Full Operational Capability (FOC), a program that provides threat measurement capabilities necessary for test and evaluation modelling and simulation; as well as planned program decreases in Fifth Generation Aerial Targets.</p>			
Accomplishments/Planned Programs Subtotals	51.566	67.897	70.992

	FY 2017	FY 2018
<p>Congressional Add: Threat Resource Analysis</p> <p>FY 2017 Accomplishments: - Developed and demonstrated a prototype system to support threat EW-enabled cyber operations for T&E for lab/anechoic chamber use by collecting classified and open-source data on C/EW threats, analyzed DoD and Service requirements for C/EW testing, and acquired U.S. targeted systems for lab test articles (ARC-231).</p> <ul style="list-style-type: none"> - Developed a Cyber Cloud that addresses many of the pitfalls Intelligence Analysts face today. - Identified the lack of a clearly defined cyber threat folder development processes to address the lack of a standardized folder structure across the Cyber community and the absence of a centralized storage location for threat folders. - Expanded our understanding of “wireless” cyber threats, which includes wireless cyber threats to support US weapon system testing. 	8.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Operational Test and Evaluation, Defense **Date:** February 2018

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	FY 2017	FY 2018
<ul style="list-style-type: none"> - Utilized investments on U.S. weapon systems that blend cyber and EW capabilities comparable to threat T&E assets. - Supported DT/OT programs with documented Cyber Electronic Warfare threat shortfalls such as Tactical Communications, Datalinks, Radio Communications, Networking, Data transportation and C4ISR Sensors and Systems. - Initiated actions to embrace the growing and evolving DOT&E Cyber Threat requirements and analyzing the convergence of Cyber and Electronic Warfare effecting the baseline required for Operational Test. - Continued to identify initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems, representative threat offensive and defensive cyber operations capabilities, and scalable cyberspace threat test environments that can interface with cyber test networks. <p>Threat Systems also continued efforts to maintain a standard set of threat performance models. These activities helped DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p>		
Congressional Adds Subtotals	8.000	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Performance Measure: Percentage of required products, such as test planning documents, tactics, techniques, procedures, threat characteristics, assessments, and reports that are developed and delivered to program managers and customers on time. The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year.