Department of Defense
Fiscal Year (FY) 2025 Budget Estimates

March 2024

The Joint Staff

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

Appropriation	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
Research, Development, Test and Evaluation, Defense-Wide	134,106	218,511	307,960
Total Research, Development, Test, & Evaluation	**134,106**	**218,511**	**307,960**

*A full-year FY 2024 appropriation for this account was not enacted at the time the budget was prepared;
account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts
included for FY 2024 reflect the annualized level provided by the continuing resolution.

Department of Defense
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
Summary Recap of Budget Activities			
Advanced Component Development & Prototypes	35,425	38,397	37,416
Management Support	98,681	180,114	270,544
Total Research, Development, Test, & Evaluation	**134,106**	**218,511**	**307,960**
Summary Recap of FYDP Programs			
General Purpose Forces	2,946	4,916	7,433
Intelligence and Communications			12,700
Research and Development	98,620	112,276	121,806
Training Medical and Other	32,540	101,319	166,021
Total Research, Development, Test, & Evaluation	**134,106**	**218,511**	**307,960**

*A full-year FY 2024 appropriation for this account was not enacted at the time the budget was prepared;

account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts

included for FY 2024 reflect the annualized level provided by the continuing resolution.

Defense-Wide
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
Summary Recap of Budget Activities			
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Defense-Wide
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

Appropriation	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
The Joint Staff	134,106	218,511	307,960
Total Research, Development, Test and Evaluation, Defense-Wide	**134,106**	**218,511**	**307,960**

*A full-year FY 2024 appropriation for this account was not enacted at the time the budget was prepared;
account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts
included for FY 2024 reflect the annualized level provided by the continuing resolution.

Defense-Wide
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

Appropriation: 0400D Research, Development, Test and Evaluation, Defense-Wide

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
104	0604331J	Rapid Prototyping Program	04	U	7,226	9,880	7,710
114	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	U	28,199	28,517	29,706
		Advanced Component Development & Prototypes			**35,425**	**38,397**	**37,416**
154	0603829J	Joint Capability Experimentation	06	U	11,998	12,402	12,385
163	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	U	51,197	61,477	72,005
198	0204571J	Joint Staff Analytical Support	06	U	2,946	4,916	7,433
205	0305248J	Joint Staff Office of the Chief Data Officer (OCDO) Activities	06	U			12,700
206	0804768J	COCOM Exercise Engagement and Training Transformation (CE2T2) – non-MHA	06	U	32,540	101,319	166,021
		Management Support			**98,681**	**180,114**	**270,544**
		Total Research, Development, Test and Evaluation, Defense-Wide			**134,106**	**218,511**	**307,960**

*A full-year FY 2024 appropriation for this account was not enacted at the time the budget was prepared;
account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts
included for FY 2024 reflect the annualized level provided by the continuing resolution.

The Joint Staff
FY 2025 President's Budget
Exhibit R-1 FY 2025 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2024

Appropriation: 0400D Research, Development, Test and Evaluation, Defense-Wide

Line No	Program Element Number	Item	Act	Sec	FY 2023 Actuals	FY 2024 PB Request with CR Adjustments*	FY 2025 Request
104	0604331J	Rapid Prototyping Program	04	U	7,226	9,880	7,710
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account is operating under the Further Additional Continuing Appropriations and Other Extensions Act, 2024 (Public Law 118-35). The amounts
included for FY 2024 reflect the annualized level provided by the continuing resolution.

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

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

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

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

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Exhibit R-2, **RDT&E Budget Item Justification:** PB 2025 The Joint Staff											**Date:** March 2024	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*						**R-1 Program Element (Number/Name)** PE 0604331J *I Rapid Prototyping Program*						
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	7.226	9.880	7.710	-	7.710	9.075	9.717	11.000	11.000	Continuing	Continuing
001: *: Rapid Defense Experimentation Reserve*	0.000	7.226	9.880	7.710	-	7.710	9.075	9.717	11.000	11.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Rapid Defense Experimentation Reserve (RDER) facilitates rapid force modernization. FY 2023 - FY 2027 Defense Planning Guidance established this initiative to encourage multi-service experimentation through a campaign of learning. Services, Agencies, and other participating organizations identify "best of breed" existing capabilities developed among the DoD prototyping programs and execute approved projects through large-scale experiments to refine the Joint Warfighting Concept (JWC). The Joint Staff (JS) J-7 leads the RDER JWC Working Group for the overall program. The Working Group provides four functions for the overall effort:

1. Assess JWC alignment for RDER proposed experiments as part of triage and proposal approval process
2. Assess RDER prototyping and field experimentation during execution.
3. Provide verification of JWC alignment for completed RDER experiments and provide validation of RDER experimentation impact to concept key operational problems, tasks, and imperatives.
4. Throughout RDER experiment lifecycle, provide data management, analytics, and archiving for the RDER campaign of learning.

The RDER program accelerates JWC experimentation. JS J-7 provides RDER leadership with independent JWC alignment and assessment, and integration into the overall JWC Experimentation Campaign. PE 0604331J, Rapid Prototyping Program is an essential JS J-7 component of an integrated RDER program. The JS contribution is complementary of OUSD R&E RDER field experimentation planning and execution, not duplicative. Crosswalk of OUSD R&E and JS J-7 efforts for RDER - OUSD R&E leads and manages the entire RDER program. JS J-7 is designated by OUSD R&E to lead and manage the RDER JWC Working Group to accomplish the functions above, and to provide data management for the overall RDER effort.

The JS support is integral and embedded.
1. The RDER program accelerates JWC experimentation.
2. JS J-7 provides RDER leadership with independent JWC alignment and assessment, and integration into the overall JWC Experimentation Campaign.
3. PE 0604331J, Rapid Prototyping Program is an essential JS J-7 component of an integrated RDER program. The JS contribution is complementary of OUSD R&E RDER field experimentation planning and execution, not duplicative.
4. Crosswalk of OUSD R&E and JS J-7 efforts for RDER - OUSD R&E leads and manages the entire RDER program. JS J-7 is designated by OUSD R&E to lead and manage the RDER JWC Working Group to accomplish the functions above, and to provide data management for the overall RDER effort – function D above. The JS support is integral and embedded. The OUSD R&E narrative describes the entire program – which includes the JS J-7 roles and functions.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff			**Date:** March 2024		
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*			**R-1 Program Element (Number/Name)** PE 0604331J I *Rapid Prototyping Program*		
B. Program Change Summary ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Previous President's Budget	7.226	9.880	11.000	-	11.000
Current President's Budget	7.226	9.880	7.710	-	7.710
Total Adjustments	0.000	0.000	-3.290	-	-3.290
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustment	-	-	-3.290	-	-3.290

Change Summary Explanation

Reduced support to Rapid Prototyping efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										Date: March 2024	
Appropriation/Budget Activity 0400 *I* 4				**R-1 Program Element (Number/Name)** PE 0604331J *I Rapid Prototyping Program*					**Project (Number/Name)** 001 *I* : *Rapid Defense Experimentation Reserve*		

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
001: *Rapid Defense Experimentation Reserve*	0.000	7.226	9.880	7.710	-	7.710	9.075	9.717	11.000	11.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Rapid Defense Experimentation Reserve (RDER) facilitates rapid force modernization. FY 2023 -2027 Defense Planning Guidance established this initiative to encourage multi-service experimentation through a campaign of learning. Services, Agencies, and other participating organizations identify "best of breed" existing capabilities developed among the DoD prototyping programs and execute approved projects through large-scale experiments to refine the Joint Warfighting Concept (JWC). The JS J-7 leads the RDER JWC Working Group for the overall program. The Working Group provides four functions for the overall effort:

1. Assess JWC alignment for RDER proposed experiments as part of triage and proposal approval process
2. Assess RDER prototyping and field experimentation during execution.
3. Provide verification of JWC alignment for completed RDER experiments and provide validation of RDER experimentation impact to concept key operational problems, tasks, and imperatives.
4. Throughout RDER experiment lifecycle, provide data management, analytics, and archiving for the RDER campaign of learning.

The RDER program accelerates JWC experimentation. JS J-7 provides RDER leadership with independent JWC alignment and assessment, and integration into the overall JWC Experimentation Campaign. JE 0604331J, Rapid Prototyping Program is an essential JS J-7 component of an integrated RDER program. The JS contribution is complementary of OUSD R&E RDER field experimentation planning and execution, not duplicative. Crosswalk of OUSD R&E and JS J-7 efforts for RDER - OUSD R&E leads and manages the entire RDER program. JS J-7 is designated by OUSD R&E to lead and manage the RDER JWC Working Group in order to accomplish the functions above, and to provide data management for the overall RDER effort.

The JS support is integral and embedded:
1. The RDER program accelerates JWC experimentation.
2. JS J-7 provides RDER leadership with independent JWC alignment and assessment, and integration into the overall JWC Experimentation Campaign.
3. PE 0604331J, Rapid Prototyping Program is an essential JS J-7 component of an integrated RDER program. The JS contribution is complementary of OUSD R&E RDER field experimentation planning and execution, not duplicative.
4. Crosswalk of OUSD R&E and JS J-7 efforts for RDER - OUSD R&E leads and manages the entire RDER program. JS J-7 is designated by OUSD R&E to lead and manage the RDER JWC Working Group in order to accomplish the functions above, and to provide data management for the overall RDER effort – function D above. The JS support is integral and embedded. The OUSD R&E narrative describes the entire program – which includes the JS J-7 roles and functions.

B. Accomplishments/Planned Programs ($ in Millions)

	FY 2023	FY 2024	FY 2025
Title: Rapid Defense Experimentation Reserve	7.226	9.880	7.710

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604331J *I Rapid Prototyping Program*	**Project (Number/Name)** 001 *I : Rapid Defense Experimentation Reserve*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Description: Experimentation outcomes will be designed to validate required capabilities enabling the JWC by evaluating and integrating prototyped technologies in operationally relevant, multi-domain environments. *FY 2024 Plans:* • Continue to align RDER proposals against the Joint Warfighting Concept. This allows leadership to accelerate experimentation while remaining aligned to the concept guiding Joint Force Design and Development across the Department. • Continue to provide RDER experimentation data collection, curation, preservation using JExNet. • Assess RDER experimentation for its impacts on JWC operational problems and required capabilities. • Provide decision makers and analysts decision ready data and analysis to make informed Joint Force Design and Development decisions at speed. *FY 2025 Plans:* • Continue to align RDER proposals against the Joint Warfighting Concept. This allows leadership to accelerate experimentation while remaining aligned to the concept guiding Joint Force Design and Development across the Department. • Continue to provide RDER experimentation data collection, curation, preservation using JExNet. • Assess RDER experimentation for its impacts on JWC operational problems and required capabilities. • Provide decision makers and analysts decision ready data and analysis to make informed Joint Force Design and Development decisions at speed. *FY 2024 to FY 2025 Increase/Decrease Statement:* Reduced support to experimentation efforts.			
Accomplishments/Planned Programs Subtotals	7.226	9.880	7.710

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

D. Acquisition Strategy
 N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 The Joint Staff | **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604331J / *Rapid Prototyping Program*	**Project (Number/Name)** 001 / : *Rapid Defense Experimentation Reserve*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RDER	IA	Joint Experimentation : Pentagon : Joint Experimentation : Pentagon	-	7.226		9.880		7.710		-		7.710	Continuing	Continuing	-
Subtotal			-	7.226		9.880		7.710		-		7.710	Continuing	Continuing	N/A

Remarks
 The program transferred from BA 04 0604826J to BA04 PE 0604331J.

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	7.226	9.880	7.710	-	7.710	Continuing	Continuing	N/A

Remarks

PE 0604331J: *Rapid Prototyping Program*
The Joint Staff

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604331J / *Rapid Prototyping Program*	**Project (Number/Name)** 001 / : *Rapid Defense Experimentation Reserve*

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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
RDER																												
RDER					████████████████																							

Exhibit R-4A, **RDT&E Schedule Details:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604331J *I Rapid Prototyping Program*	**Project (Number/Name)** 001 *I : Rapid Defense Experimentation Reserve*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
RDER				
RDER	4	2023	3	2025

PE 0604331J: *Rapid Prototyping Program*
The Joint Staff

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff										**Date:** March 2024	

| **Appropriation/Budget Activity**
0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)* | | | | | **R-1 Program Element (Number/Name)**
PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments* | | | | | | |

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	147.019	28.199	28.517	29.706	-	29.706	30.451	29.218	29.845	31.830	-	-
001: *C5 Assessments and Analyses*	74.084	9.780	7.483	8.512	-	8.512	9.036	8.706	8.858	9.302	-	-
002: *C5 Capability Development*	41.706	11.451	8.055	16.981	-	16.981	17.141	16.135	16.491	18.013	-	-
003: *Joint Fires C2 Interoperability*	31.229	6.968	3.919	4.213	-	4.213	4.274	4.377	4.496	4.515	-	-
004: *Joint All Domain Command and Control (JADC2)*	0.000	0.000	9.060	-	-	-	-	-	-	-	-	-

Note

For FY 2023 and FY 2024, the Department leveraged this program and increased investment to include foundational CJADC2 development activities conducted within existing projects. In FY 2023, increased investments in CJADC2 were applied and executed to accelerate the level of effort in the existing projects and was described as such in the R2 exhibit. In FY 2024, a new project 004 (JADC2) was created for the increase of investment in CJADC2 efforts. In FY 2025 – 2029, Project 004 (JADC2) funds are realigned to the program's baseline projects for planned execution.

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. The Joint Staff is the DoD lead for the design and integration of Combined Joint All-Domain Command & Control (CJADC2) capabilities and development efforts across the Department. The Joint C5 program is the Joint Staff focal point for this responsibility. The Joint C5 R&D projects collectively provide the analytical basis and action arm of the CJADC2 Cross Functional Team (CFT) working groups charged with execution of the DoD CJADC2 Strategy, Implementation, and Campaign Plans.

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2025 The Joint Staff				**Date:** March 2024	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*			**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*		
B. Program Change Summary ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Previous President's Budget	28.199	28.517	19.430	-	19.430
Current President's Budget	28.199	28.517	29.706	-	29.706
Total Adjustments	0.000	0.000	10.276	-	10.276
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Funding Increase	-	-	10.276	-	10.276

Change Summary Explanation

Program increase to accelerate the development of Combined Joint All-Domain Command and Control (CJADC2) capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										**Date:** March 2024	

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	Project (Number/Name) 001 / *C5 Assessments and Analyses*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
001: *C5 Assessments and Analyses*	74.084	9.780	7.483	8.512	-	8.512	9.036	8.706	8.858	9.302	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the DoD lead for the integration of Combined Joint All-Domain Command and Control (CJADC2) capabilities and development efforts, 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 fund 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, operational and tactical command and control, networking, satellite communications, advanced secure digital datalinks, and allied/coalition data exchanges.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: C5 Assessments and Analyses *Description:* Support the Chairman's statutory requirement to advise the Secretary of Defense on development of joint command, control, communications and cyber capability, including the design, integration and interoperability of such capabilities through requirements, integrated architectures, data standards and assessments. Also supports the Chairman's focus area of improving joint and Combined warfighting capability and the Secretary'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. *FY 2024 Plans:* Support National Military Strategy and Globally Integrated Operations (GIO) by conducting quantifiable analysis, assessment, and integration activities that inform and enhance Joint and Combined warfighter capabilities and interoperability. Activities utilize actual and replicated operational environments and networks to conduct capability development, support joint and coalition experimentation, and support acquisition and systems employment decisions. Continue to address warfighter needs across all domains by conducting activities in rapidly reconfigurable Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) laboratories replicating joint and coalition system of systems operational environments as well as in operational venues such as exercises. Employ a deployable assessment capability supporting the instrumentation, collection and analysis of decision quality data for joint command, control, and battle management operations at echelon, to include deployed field environments. Projects include:	9.780	7.483	8.512

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 001 / *C5 Assessments and Analyses*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Bold Quest (BQ) Coalition Interoperability Demonstrations – Support the design, planning, and execution of BQ events at international venues, which address: close air support, Mission Partner Environment (MPE) / Federated Mission Networking (FMN), Identification, Friend or Foe (IFF) testing, and cyber effects on operations for U.S. forces and coalition partners, i.e., SABRE (Secret And Below Releasable Environment) and Fully Networked Command and Control Capability (FNC3) demonstrations. Support includes accredited exercise networks, associated Command and Control (C2) systems, and data collection and analysis capabilities. Assess Combatant Command Coalition mission networks, e.g., INDOPACOM Joint Fires Network (JFN) capability development and coalition environment, as well as CENTCOM Collaboration Partner Environment (CPE). CPE is a single environment that allows for information sharing with partners supporting and enabling Combined Joint All-Domain Command and Control (CJADC2). Co-lead DoD Sponsored Global Information Dominance Experiment (GIDE) series. Joint Staff and Combatant Commands test the effectiveness of evolving C2 concepts. Integrate, refine, and accelerate the Joint and Combined warfighting capabilities. Capabilities include command and control of Joint Precision Long-Range Fires, contested logistics, integrated air and missile defense, and space support to targeting. $1.272M of FY 2024 Project Code 004 ($9.060M) funds targeted investments for foundational CJADC2 assessments and analyses within this level of effort. *FY 2025 Plans:* Support National Military Strategy and Globally Integrated Operations (GIO) by conducting quantifiable analysis, assessment, and integration activities that inform and enhance Joint and Combined warfighter capabilities and interoperability. Activities utilize actual and replicated operational environments and networks to conduct capability development, support joint and coalition experimentation, and support acquisition and systems employment decisions. Continue to address warfighter needs across all domains by conducting activities in rapidly reconfigurable Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) laboratories replicating joint and coalition system of systems operational environments as well as in operational venues such as exercises. Employ a deployable assessment capability supporting the instrumentation, collection and analysis of decision quality data for joint command, control, and battle management operations at echelon, to include deployed field environments. Projects include: Bold Quest (BQ) Coalition Interoperability Demonstrations			

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 **/** 4	**R-1 Program Element (Number/Name)** PE 0604826J **/** *Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments*	**Project (Number/Name)** 001 **/** *C5 Assessments and Analyses*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
– Support the design, planning, and execution of international BQ demonstrations that address: close air support, Mission Partner Environment (MPE)/Federated Mission Networking (FMN), Identification, Friend or Foe (IFF) testing, and cyber effects on operations for U.S. forces and coalition partners, i.e., SABRE (Secret And Below Releasable Environment) Initial Operational Capability in the Fourth Quarter FY 2025, FNC3 (Fully Networked Command and Control Capability) demonstrations. – Enable evaluation of coalition combat network interoperability (e.g. coordinated multi-domain targeting, and Artillery Systems Cooperation Activities) and battle management systems/processes with their associated Command and Control (C2) systems (e.g. Advanced Battle Management System) - Leverage existing combatant command large scale exercises (e.g. Northern Edge, Scarlet Dragon) and capitalize on development/operational weapon system tests to reduce overall risk to fielding combat capabilities. Assess the federation of Combatant Command and allied operational mission networks. Co-lead DoD Sponsored Global Information Dominance Experiment (GIDE) series. Integrate, refine, and accelerate the Joint and Combined warfighting capabilities. Capabilities include command and control of Joint Precision all-domain Fires, Joint Battle Management, contested logistics, integrated air and missile defense, space support to targeting, and synchronized non-kinetic effects. Includes $1.012M for targeted investment in foundational CJADC2 assessments and analyses. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2024 project baseline funding of $7.483M, with $1.272M realigned from Project 004, totals $8.755M. The net increase of $1.029M reflects the realignment and economic adjustments.			
Accomplishments/Planned Programs Subtotals	9.780	7.483	8.512

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, Acquisition Strategy and current Execution.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 The Joint Staff			**Date:** March 2024	

Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 001 / *C5 Assessments and Analyses*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Management and Engineering Technical Services	C/CPFF	Various : Suffolk, Eglin	74.084	9.780		7.483		8.512		-		8.512	Continuing	Continuing	-
Subtotal			74.084	9.780		7.483		8.512		-		8.512	Continuing	Continuing	N/A

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	74.084	9.780	7.483	8.512	-	8.512	Continuing	Continuing	N/A

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments*	**Project (Number/Name)** 001 *I C5 Assessments and Analyses*

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 001 / *C5 Assessments and Analyses*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint C5I				
C5 Assessments and Analyses	1	2025	4	2025

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										Date: March 2024	

Appropriation/Budget Activity 0400 *I* 4				R-1 Program Element (Number/Name) PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*				Project (Number/Name) 002 *I C5 Capability Development*			

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
002: *C5 Capability Development*	41.706	11.451	8.055	16.981	-	16.981	17.141	16.135	16.491	18.013	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Command, Control, Computers, Communications, Cyber (C5) capability development functions as the DoD requirements lead for the joint command and control family of programs, Joint cyber, and requirements lead for mission partner environment (MPE). The program also develops joint context, containers, components, and code (C4) architectures, joint common systems functions, joint mission threads, leads analysis and reviews architectures and standards in joint capability development systems. C5 development enables warfighter access to authoritative data sources and improves data interoperability by establishing common command and control (C2) data and service standards.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: C5 Capability Development *Description:* Lead C2 capability development and integration to achieve an interdependent joint force. Supports Chairman's focus to improve joint warfighter capability and enhance global integration. This will be accomplished through five focus areas: capability development, C5 architectures, data and services, coalition interoperability, and joint experimentation. *FY 2024 Plans:* Capability Development - Analyze/coordinate out-year Command and Control (C2) integrated priority lists, capability gaps, Posture Reviews, and CJADC2 Implementation Plan and Campaign Plan Line of Effort (LOE) requirements. Develop & deliver a CJADC2 Capability Needs Database providing DoD visibility of Joint C2 requirements. Co-lead CJADC2 Implementation Plan LOE 2 (Human Element – Doctrine, Organization, Training, Materiel, Leadership Awareness, Personnel, Facilities & Policy (DOTMLPF-P)). Co-lead GIDE series planning and integration. Develop CJADC2 Capability Portfolio Management Reviews (CPMRs) and an overarching CAPSTONE CJADC2 Initial Capabilities Document (ICD). Support the development of C2 Joint Warfighting Concepts (JWC) and Concept-Required Capabilities (CRC). Lead the JWC C2 functional planning group for C2 operationalization and implementation. C5 Architectures - Provide architecture, mission thread, and mission-based analysis and analysis products as required to support the Chairman's directed focus areas. Transition Mission Enabled Solutions Assessment (MESA) to ADVANA. Continue development of CJADC2 Reference Design and the CJADC2 baseline. Update the Joint Common Service/System Function List and Warfighter Mission Area (WMA) Architecture Development Standards to improve WMA architecture integration and interoperability. Continue to improve and expand the quality and amount of architecture information and data available for	11.451	8.055	16.981

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments*	**Project (Number/Name)** 002 *I* C5 Capability Development

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
analysis and reuse. Conduct analyses and develop mission-based architectures and metrics for Joint Capabilities Integration and Development System (JCIDS) C5 capability requirement documents, Integrated Acquisition Portfolio Reviews (IAPRs), Strategic Portfolio Reviews (SPRs), Capability Portfolio Management Reviews, CJADC2 Campaign Plans. Data and Standards – Develop, promote, and integrate common enterprise data and services requirements, standards, technical specifications, and policy, including enterprise data management to improve Combined Joint All Domain C2 interoperability. Perform and lead proof of concept activities, including cloud-based data lakes that enable standardization of the NIEMOpen data exchange model and the North Atlantic Treaty Organization (NATO) Core Data Framework (NCDF) with selected Combined Joint All Domain C2 communities of interest, including robotics and autonomous systems. Conduct at least one Multi-Domain Operations proof of concept demonstration with NATO with interested Services, Agencies and coalition partners to improve warfighter interoperability and enhance operational effectiveness. Lead, align and standardize emerging Combined Joint All Domain C2 tactical data link, symbology (including cyber symbology) and messaging standards to support common enterprise-level information sharing. Support standardization of common warfighter Identity Access Management, robust cyber security, standardized interfaces and common data tagging to promote Combined Joint All Domain C2 interoperability. Coalition Interoperability - International lead for the Coalition Interoperability Assurance and Validation (CIAV) providing interoperability mission-based assessments across the Combatant Commands. Represent the Combatant Commands, Services and Agencies mission partner environment (MPE) Requirements. Continue to lead mission partner environment (MPE) demonstrations and implementation. Support coalition cyber priorities across DoD by co-leading the MPE cyber security efforts and supporting the federated mission networking (FMN) cyber security working group. Continue to shape North Atlantic Treaty Organization (NATO) FMN implementation to ensure it remains aligned with MPE, including related capability development. Provide support to the Combined Communications-Electronics Board (CCEB) to ensure interoperability among the Five Eyes nations (Canada, New Zealand, Australia, UK, and U.S.). Lead the U.S. C5I Standardization Agreements ratification. Co-lead the CJADC2 LOE 5 modernizing mission partner information sharing. Joint Experimentation - Combatant Commands, Services, Agencies and Allies/Coalition partners are provided a laboratory, exercise and assessment venue for the warfighter and capability developer to identify and solve interoperability, integration, and cyber issues. Provide the CJADC2 Joint Demonstration Environment (JDE) for an integrated wide-area experimental network for the conduct of interoperability assessments and integration activities. Contribute to wargames, exercises and experiments that explore current and future warfighting C2 concepts with coalition partners including Mission Partner Environments.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400 I 4	R-1 Program Element (Number/Name) PE 0604826J I *Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments*	Project (Number/Name) 002 I *C5 Capability Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
$7.788M of total FY 2024 Project Code 004 ($9.060M) funds targeted investment for foundational CJADC2 capability development activities within this level of effort. ***FY 2025 Plans:*** Capability Development - Analyze/coordinate out-year Command and Control (C2) integrated priority lists, capability gaps, Posture Reviews, and CJADC2 Implementation Plan and Campaign Plan LOE requirements that are foundational to CJADC2. Oversee & sustain CJADC2 Capability Needs Database providing DoD visibility of Joint C2 requirements. Co-lead CJADC2 Implementation Plan LOE 2 (Human Element – Doctrine, Organization, Training, Materiel, Leadership Awareness, Personnel, Facilities & Policy (DOTMLPF-P)). Co-lead GIDE series planning and integration. Develop CJADC2 Capability Portfolio Management Reviews (CPMRs) and manage CAPSTONE CJADC2 Initial Capabilities Document (ICD) execution. Support the development of C2 Joint Warfighting Concepts (JWC) and Concept-Required Capabilities (CRC). Lead the JWC C2 functional planning group for C2 operationalization and implementation. C5 Architectures - Provide architecture, mission thread, and mission-based analysis and analysis products as required to support the Chairman's directed focus areas. Transition Mission Enabled Solutions Assessment (MESA) to ADVANA. Continue development of CJADC2 Reference Design and the CJADC2 baseline. Update the Joint Common Service/System Function List and Warfighter Mission Area (WMA) Architecture Development Standards to improve WMA architecture integration and interoperability. Continue to improve and expand the quality and amount of architecture information and data available for analysis and reuse. Conduct analyses and develop mission-based architectures and metrics for Joint Capabilities Integration and Development System (JCIDS) C5 capability requirement documents, Integrated Acquisition Portfolio Reviews (IAPRs), Strategic Portfolio Reviews (SPRs), Capability Portfolio Management Reviews, and CJADC2 Campaign Plans in order to provide a common, mission-based joint and coalition design framework for the Department that includes mission partners and considers adversary actions. Data and Standards – Develop, promote, and integrate common enterprise data and services requirements, standards, technical specifications, and policy, including enterprise data management to improve Combined Joint All Domain C2 interoperability. Perform and lead proof of concept activities, including cloud-based data lakes that enable standardization of the NIEMOpen data exchange model and the North Atlantic Treaty Organization (NATO) Core Data Framework (NCDF) with selected Combined Joint All Domain C2 communities of interest, including robotics and autonomous systems. Conduct at least one Multi-Domain Operations proof of concept demonstration with NATO with interested Services, Agencies and coalition partners to improve warfighter interoperability and enhance operational effectiveness. Lead, align and standardize emerging Combined Joint All Domain C2 tactical data link, symbology (including cyber symbology) and messaging standards to support common enterprise-level information sharing. Support standardization of common warfighter Identity Access Management, robust cyber security,			

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 002 *I C5 Capability Development*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
standardized interfaces and common data tagging in order to guide and promote a DoD federated data environment for sharing information through interfaces and services to discover, understand and exchange data with partners across all domains, security levels and echelons. . Coalition Interoperability - International lead for the Coalition Interoperability Assurance and Validation (CIAV) providing interoperability mission-based assessments across the Combatant Commands. Represent the Combatant Commands, Services and Agencies mission partner environment (MPE) Requirements. Continue to lead mission partner environment (MPE) demonstrations and implementation. Support coalition cyber priorities across DoD by co-leading the MPE cyber security efforts and supporting the federated mission networking (FMN) cyber security working group. Continue to shape North Atlantic Treaty Organization (NATO) FMN implementation to ensure it remains aligned with MPE, including related capability development. Provide support to the Combined Communications-Electronics Board (CCEB) to ensure interoperability among the Five Eyes nations (Canada, New Zealand, Australia, UK, and U.S.). Lead the U.S. C5I Standardization Agreements ratification. Co-lead the CJADC2 LOE 5 modernizing mission partner information sharing in order to lead and shape the advancement of current and future C2 capabilities that will ensure Joint Force interoperability with mission partners across all warfighting domains. Joint Experimentation - Combatant Commands, Services, Agencies and Allies/Coalition partners are provided a laboratory, exercise and assessment venue for the warfighter and capability developer to identify and solve interoperability, integration, and cyber issues. Provide the CJADC2 Joint Demonstration Environment (JDE) for an integrated wide-area experimental network for the conduct of interoperability assessments and integration activities. Contribute to wargames, exercises and experiments that explore current and future warfighting C2 concepts with coalition partners including Mission Partner Environments in order to support the assessment and integration of emerging technologies and proven CJADC2 solutions into the joint operational environment to address joint warfighting concept near, mid, and long-term requirements. Includes $8.970M for targeted investment in foundational CJADC2 capability development activities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2024 project baseline funding of $8.055M, with $7.788M from Project 004, totals $15.843M. The net increase of $8.926M reflects the realignment and economic adjustments.			
Accomplishments/Planned Programs Subtotals	11.451	8.055	16.981

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

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 **/** 4	**R-1 Program Element (Number/Name)** PE 0604826J **/** *Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 002 **/** *C5 Capability Development*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

Biannual review of Command, Control, Communications, Computers (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-3, **RDT&E Project Cost Analysis:** PB 2025 The Joint Staff | **Date:** March 2024

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	Project (Number/Name) 002 / *C5 Capability Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Management and Engineering Technical Services	C/CPFF	Various : Suffolk, Eglin	41.706	11.451		8.055		16.981		-		16.981	Continuing	Continuing	-
Subtotal			41.706	11.451		8.055		16.981		-		16.981	Continuing	Continuing	N/A

			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			41.706	11.451		8.055		16.981		-		16.981	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 / 4	**R-1 Program Element (Number/Name)** PE 0604826J / *Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 002 / *C5 Capability Development*

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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																												▌

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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																												
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Exhibit R-4A, RDT&E Schedule Details: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 002 *I C5 Capability Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
C5 Capability Development				
C5 Capability Development	4	2022	3	2024

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Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										**Date:** March 2024	
Appropriation/Budget Activity 0400 *I* 4					**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*				**Project (Number/Name)** 003 *I Joint Fires C2 Interoperability*		

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
003: *Joint Fires C2 Interoperability*	31.229	6.968	3.919	4.213	-	4.213	4.274	4.377	4.496	4.515	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the DoD lead for the integration of Combined Joint All-Domain Command & Control (CJADC2) capabilities and development efforts, 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 2023	FY 2024	FY 2025
Title: Joint Fires C2 Interoperability *Description:* These efforts directly support Chairman, Joint Chiefs of Staff (CJCS) guidance to increase interoperability with allies and partners, to more effectively counter trans-regional threats. Supports Chairman's focus area of improving joint warfighting capability and the Secretary's line of effort to strengthen 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, 30 joint fires international signatories, 22 Bold Quest partner nations, and 6 observer nations. Those observer nations now include Switzerland, Australia, Republic of Korea, Austria, 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. *FY 2024 Plans:* Plan and execute Joint Staff-sponsored international Bold Quest capability demonstration and assessment in conjunction with the GIDE series, focused on interoperability for joint and coalition fires underpinned by Mission Partner Environment (MPE) concepts, e.g., SABRE and Fully Networked Command, Control, and Communications (FNC3) capabilities. Bold Quest data and assessments inform U.S. and Partner Nation investment in multiple capability areas: combat identification, friendly force tracking, digitally aided close air support and fires, integrated air and missile defense (Mode 5 Identify Friend or Foe), coalition intelligence surveillance and reconnaissance, integrated interoperable simulations, and cyber. These efforts directly support the National	6.968	3.919	4.213

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
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*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
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 provide staff assistance visits for development of close air support-related training and certification programs. Continue leading the CID-FFT ESC and JFS ESC in order to address capability shortfalls/gaps, analyze and recommend integrated joint and coalition solutions to warfighter issues. No FY 2024 Project Code 004 ($9.060M) funds allocated; baseline funding only. *FY 2025 Plans:* Plan and execute Joint Staff-sponsored international Bold Quest capability demonstration and assessment in conjunction with the GIDE series, focused on interoperability for joint and coalition fires underpinned by Mission Partner Environment (MPE) concepts, e.g., SABRE and Fully Networked Command, Control, and Communications (FNC3) capabilities. Bold Quest data and assessments inform U.S. and Partner Nation investment in multiple capability areas: combat identification, friendly force tracking, digitally aided close air support and fires, integrated air and missile defense (Mode 5 Identify Friend or Foe), coalition intelligence surveillance and reconnaissance, integrated interoperable simulations, 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 provide staff assistance visits for development of close air support-related training and certification programs. Continue leading the CID-FFT ESC and JFS ESC in order to address capability shortfalls/gaps, analyze and recommend integrated joint and coalition solutions to warfighter issues. Includes $0.294M for targeted investment in foundational CJADC2 joint fires C2 interoperability activities. *FY 2024 to FY 2025 Increase/Decrease Statement:* The $0.294M increase supports targeted investment in foundational CJADC2 joint fires C2 interoperability activities.			
Accomplishments/Planned Programs Subtotals	6.968	3.919	4.213

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-3, **RDT&E Project Cost Analysis:** PB 2025 The Joint Staff														**Date:** March 2024		

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*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Management and Engineering Technical Services	C/CPFF	Various : Suffolk, Eglin	31.229	6.968	Oct 2022	3.919		4.213		-		4.213	Continuing	Continuing	-
Subtotal			31.229	6.968		3.919		4.213		-		4.213	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.229	6.968		3.919		4.213		-		4.213	Continuing	Continuing	N/A

Remarks

PE 0604826J: *Joint C5 Capability Development, Integra...*
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Exhibit R-4, RDT&E Schedule Profile: PB 2025 The Joint Staff		Date: March 2024
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

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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 Fires C2 Interoperability																												
Joint Fires C2 Interoperability																												▊

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 Fires C2 Interoperability																												
Joint Fires C2 Interoperability	▊	▊	▊	▊	▊	▊																						

Exhibit R-4A, **RDT&E Schedule Details:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 **I** 4	**R-1 Program Element (Number/Name)** PE 0604826J **I** *Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments*	**Project (Number/Name)** 003 **I** *Joint Fires C2 Interoperability*

Schedule Details

Events by Sub Project	Start		End	
	Quarter	**Year**	**Quarter**	**Year**
Joint Fires C2 Interoperability				
Joint Fires C2 Interoperability	4	2022	3	2024

PE 0604826J: *Joint C5 Capability Development, Integra...*
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Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										Date: March 2024	
Appropriation/Budget Activity 0400 I 4				**R-1 Program Element (Number/Name)** PE 0604826J I *Joint C5 Capability Development, Integration, and Interoperability Assessments*						**Project (Number/Name)** 004 I *Joint All Domain Command and Control (JADC2)*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
004: *Joint All Domain Command and Control (JADC2)*	0.000	0.000	9.060	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding to execute the Joint Staff role as the action arm of the Combined Joint All - Domain Command and Control (CJADC2) Cross Functional Team (CFT). Although listed in 2024 as a separate project within the program for visibility of one-year investment increase to accelerate CJADC2 capabilities, these funds are executed within Projects 001 – 003 in accordance with their FY 2024 plans. For FY 2025 – 2029, Project 004 JADC2 funds internally realigned to Projects 001 – 003 as listed below to accurately reflect planned execution.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: JADC2	-	9.060	-

Description: DoD lead for the integration of CJADC2 capabilities and development efforts via: C5 assessments and analyses; capability development, C4 architectures, data and services, coalition interoperability and integration, joint demonstration environment; and joint fires C2 interoperability.

FY 2024 Plans:
As the DoD lead for the integration of Combined Joint All-Domain Command and Control (CJADC2) capabilities and development efforts: provide the joint hub for an integrated wide-area experimental network and conduct supporting interoperability assessments and integration activities in support of scheduled wargames, exercises and experiments that explore current and future warfighting C2 concepts with coalition partners including Mission Partner Environments; 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.

FY 2024 to FY 2025 Increase/Decrease Statement:
FY 2024 funding of $9.060M in this project internally realigned to accurately reflect planned execution:
- $1.272M to Project Code 001
- $7.788M to Project Code 002

Accomplishments/Planned Programs Subtotals	-	9.060	-

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 004 *I Joint All Domain Command and Control (JADC2)*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

 N/A

PE 0604826J: *Joint C5 Capability Development, Integra...*
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 The Joint Staff															Date: March 2024	

Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Develo pment, Integration, and Interoperability Ass essments	Project (Number/Name) 004 / Joint All Domain Command and Control (JADC2)

Test and Evaluation ($ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
JADC2	IA	Joint Experimentation : Pentagon	-	-		9.060		-		-		-	-	-	-
Subtotal			-	-		9.060		-		-		-	-	-	N/A

			Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		9.060		-		-		-	-	-	N/A

Remarks

PE 0604826J: *Joint C5 Capability Development, Integra...*
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Exhibit R-4, RDT&E Schedule Profile: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 004 *I Joint All Domain Command and Control (JADC2)*

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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 All Domain Command and Control																												
Joint All Domain Command and Control					████████████																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604826J *I Joint C5 Capability Development, Integration, and Interoperability Assessments*	**Project (Number/Name)** 004 *I Joint All Domain Command and Control (JADC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint All Domain Command and Control				
Joint All Domain Command and Control	2	2024	3	2025

PE 0604826J: *Joint C5 Capability Development, Integra...*
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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff										**Date:** March 2024	

Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*					**R-1 Program Element (Number/Name)** PE 0603829J *I Joint Capability Experimentation*						

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	30.145	11.998	12.402	12.385	-	12.385	12.402	12.402	12.402	12.402	-	-
001: *Joint Capability Experimentation*	30.145	11.998	12.402	12.385	-	12.385	12.402	12.402	12.402	12.402	-	-

A. Mission Description and Budget Item Justification

The FY 2019 National Defense Authorization Act (NDAA) included as one of the Chairman's responsibilities to address experimentation on future concepts and the National Defense Strategy Implementation Guidance directs that rigorous experimentation take place on concepts to ensure Department investments adequately address future requirements as well as those of today. Accordingly, the Joint Staff requires an experimentation capability to analyze and validate priority joint concept required capabilities. The Joint Staff will lead, plan, and execute the Global Integrated Wargame (GIWG) 23 events to examine the Joint Warfighting Concept (JWC) 3.0 operational logic and identified gaps to support delivery of an evaluated concept to the Secretary of Defense.

Concept analysis and validation will have a multi-faceted nature to meet the Chairman's Title 10 responsibility of, "identifying new joint military capabilities based on advances in technology and concepts of operation, and recommending investments and experiments in such capabilities." Wargames will assess baseline mission and campaign level outcomes of the concepts as well as identify a tradespace of potential new capabilities. This tradespace of capabilities is further explored with quantitative models and software that identify the most efficient cost and capability tradeoffs to help meet the Title 10 responsibility of "advising the Secretary on new and alternative joint military capabilities, and alternative program recommendations and budget proposals, within projected resource levels."

The National Defense Strategy directs "early design tradeoffs in the requirements process to increase the speed of delivery." The Joint Staff approach to tradespace exploration follows that guidance by providing a cost conscious and operationally relevant prioritization tradeoff technique early in the portfolio design process. Using this rigorous prioritization approach, the capability development cycle can efficiently focus resources on more detailed experimentation of specific capabilities to inform the requirements process. The analysis from the experimentation program will be used to provide foundational evidence to directly inform the Joint Military Net Assessment (JMNA), the Chairman's Program Recommendation (CPR), and ultimately the Defense Planning Guidance for Joint Force development.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff				**Date:** March 2024	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*			**R-1 Program Element (Number/Name)** PE 0603829J I *Joint Capability Experimentation*		
B. Program Change Summary ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Previous President's Budget	11.998	12.402	12.385	-	12.385
Current President's Budget	11.998	12.402	12.385	-	12.385
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

Adjustment to comply with the Department's economic assumptions. Small reduction to Research and Development contracts.

PE 0603829J: *Joint Capability Experimentation*
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Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										Date: March 2024	

Appropriation/Budget Activity 0400 / 6				R-1 Program Element (Number/Name) PE 0603829J / Joint Capability Experimentation				Project (Number/Name) 001 / Joint Capability Experimentation			

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
001: Joint Capability Experimentation	30.145	11.998	12.402	12.385	-	12.385	12.402	12.402	12.402	12.402	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The NDAA documents the Chairman's responsibilities to include experimentation on future concepts. The National Defense Strategy Implementation Guidance directed rigorous experimentation on concepts as a means to ensure Department investments adequately address future requirements, not just near term. Given this, the Joint Staff must establish an experimentation capability suitable for analysis and validation of priority joint concept required capabilities. The base of experimentation and wargaming will expand through the initial operating capability to full operating capability. This will provide the necessary capacity and capability. The combination will allow the Chairman to identify cost efficient and effective capability tradeoffs. This capability will enable the Chairman to fulfill his Title 10 responsibility, "advising the Secretary on new and alternative joint military capabilities, and alternative program recommendations and budget proposals, within projected resource levels." This capability more fully supports the Chairman's production of the Joint Military Needs Assessment (JMNA), the Chairman's Program Recommendation (CPR) and ultimately the Defense Planning Guidance for Joint Force development. This PE funds the Joint Staff J7 Joint Wargaming and Experimentation Division (JWED) three main Advanced Technologies efforts; 1) Globally Integrated Wargames - Advanced Technologies (GIWG –AT), 2) Experimentation Campaign events necessary such as the Joint Experimentation Forum (JEF) for force design and development events supporting Joint Warfighting Concept, Joint Fires, Joint Logistics, and Joint Command & Control, and 3) Joint Experimentation Network - Advanced Technologies (JExNet AT) develops an integrated system of data architecture across federated knowledge platforms and networks to include joint experimentation activities and various learning events that enable knowledge sharing.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Joint Capability Experimentation **Description:** The NDAA documents the Chairman's responsibilities to address experimentation on future concepts and the National Defense Strategy Implementation Guidance directed vigorous experimentation take place on concepts to ensure department investments are adequately addressing future requirements as well as those today. The project will deliver analytically rigorous, resource-conscious and operationally-validated portfolio investment strategies for the CJCS to ensure an enduring competitive advantage. **FY 2024 Plans:** Execute joint experimentation and wargaming focused on Joint Force Development (JFD) that will enhance the capability of the Joint Staff to provide the Chairman with sound analysis of the future environment, concepts, and joint capabilities. Funds support three main efforts;(1) Globally Integrated Wargames - Advanced Technologies (GIWG –AT), (2) Experimentation Campaign events necessary such as the Joint Experimentation Forum (JEF) for force design and development events supporting Joint Warfighting Concept, Joint Fires, Joint Logistics, and Joint Command & Control, and (3) Joint Experimentation Network	11.998	12.402	12.385

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 **/** 6	**R-1 Program Element (Number/Name)** PE 0603829J **/** *Joint Capability Experimentation*	**Project (Number/Name)** 001 **/** *Joint Capability Experimentation*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
- Advanced Technologies (JExNet AT) developing next generation data architecture across federated knowledge platforms, networks, experimentation activities, and various learning events to enable Joint Warfighting Concept. *FY 2025 Plans:* Execute joint experimentation and wargaming focused on Joint Force Development (JFD) that will enhance the capability of the Joint Staff to provide the Chairman with sound analysis of the future environment, concepts, and joint capabilities. Funds support three main efforts; (1) Globally Integrated Wargames - Advanced Technologies (GIWG –AT), (2) Experimentation Campaign events necessary such as the Joint Experimentation Forum (JEF) for force design and development events supporting Joint Warfighting Concept, Joint Fires, Joint Logistics, and Joint Command & Control, and (3) Joint Experimentation Network - Advanced Technologies (JExNet AT) developing next generation data architecture across federated knowledge platforms, networks, experimentation activities, and various learning events to enable Joint Warfighting Concept. *FY 2024 to FY 2025 Increase/Decrease Statement:* Minor adjustment.			
Accomplishments/Planned Programs Subtotals	11.998	12.402	12.385

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

D. Acquisition Strategy
 N/A

PE 0603829J: *Joint Capability Experimentation*
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| Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff | | | | | | | | | | | Date: March 2024 | |

| Appropriation/Budget Activity
0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6:
RDT&E Management Support | R-1 Program Element (Number/Name)
PE 0605126J *I Joint Integrated Air & Missile Defense Organization (JIAMDO)* |

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	528.477	51.197	61.477	72.005	-	72.005	78.057	78.778	77.611	72.411	-	-
P001: *Core*	194.914	16.911	14.170	15.577	-	15.577	16.344	16.559	17.019	17.019	-	-
P005: *Nimble Fire*	178.758	13.797	18.343	27.301	-	27.301	32.657	32.791	30.537	25.337	-	-
P006: *Cruise Missile Combat Identification (CID)*	93.357	3.911	5.211	5.275	-	5.275	5.321	5.474	5.584	5.584	-	-
P007: *Homeland Defense Capability*	61.448	16.578	22.120	22.153	-	22.153	21.969	22.117	22.560	22.560	-	-
P008: *Joint Regional Integrated Air and Missile Defense Capabilities Mix (JRICM)*	0.000	0.000	1.633	1.699	-	1.699	1.766	1.837	1.911	1.911	-	-

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 Title 10 responsibilities as they relate to IAMD issues. JIAMDO supports the Joint Requirements Oversight Council (JROC) in its Title 10 U.S. Code 181 authorities as the Joint Staff lead of the IAMD Capability Portfolio Management Review (CPMR) process. 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 close coordination with U.S. Space Command (USSPACECOM), 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 direction of the JROC, JIAMDO develops the IAMD prioritized capabilities list and the global integrated IAMD assessment and analysis of the Ballistic Missile Defense System. JIAMDO supports USSPACECOM and 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.

PE 0605126J: *Joint Integrated Air & Missile Defense O...*
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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff				**Date:** March 2024
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*		**R-1 Program Element (Number/Name)** PE 0605126J *I Joint Integrated Air & Missile Defense Organization (JIAMDO)*		

B. Program Change Summary ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Previous President's Budget	51.197	61.477	62.505	-	62.505
Current President's Budget	51.197	61.477	72.005	-	72.005
Total Adjustments	0.000	0.000	9.500	-	9.500
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• NIMBLE FIRE	-	-	9.500	-	9.500

Change Summary Explanation

Minor programmatic increase to comply with the Department's revised economic assumptions and to fund hardware, software, and security enhancements for the NIMBLE FIRE exercise series to conduct Operator-In-The-Loop exercises and simulations in a realistic environment to support joint force training.

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff										**Date:** March 2024	

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*

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
P001: *Core*	194.914	16.911	14.170	15.577	-	15.577	16.344	16.559	17.019	17.019	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is chartered to plan, coordinate, and oversee Integrated Air and Missile Defense (IAMD) requirements, concepts, and architectures. As part of the Joint Staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO supports the Joint Requirements Oversight Council (JROC) in its Title 10 U.S. Code 181 authorities as the Joint Staff lead of the IAMD Capability Portfolio Management Review (CPMR) process. JIAMDO is the IAMD proponent for requirements and capabilities within the DoD's resource allocation system. JIAMDO leads IAMD mission and utility analysis, integrates IAMD within the force protection joint capability area, and conducts evaluations of joint IAMD architectures.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and 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. At the direction of the JROC, JIAMDO develops 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 homeland defense solutions.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Core	16.911	14.170	15.577
Description: 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 and simulation, analytical functions and products, senior level briefings, and all travel costs for government and contractor support personnel. Routine functions include performing analyses, demonstrations, and programmatic assessments of technology, operations, requirements, and weapons systems. In coordination with Services and CCMDs, JIAMDO Core funds the definition, assessment, development, and approval of Joint IAMD operational concepts, operational architectures, IAMD CPMR and capability requirements. These assessments guide the Department's joint, interagency, integrated and net-centric IAMD. JIAMDO Core provides funding to: 1. Conduct and integrate joint studies, simulations, war games, force resource allocation, and interoperability initiatives. 2. Manage relevant Congressional interaction and CCMD interface.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
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*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
3. Directly support and sponsor homeland air surveillance-related demonstration and analysis activities. 4. Manage the Integrated Air and Missile Defense (IAMD) Working Group, the Operational Forces Standing Committee (OFSC) and co-chair the Protection Functional Capabilities Board focusing CCMD, Joint Staff, and Service collaboration efforts to generate joint concepts and develop the IAMD architecture and roadmap. JIAMDO Core enables strategic planning development, security, travel, and other support activities. Funding pays for: contracted Systems Engineering and Technical Assistance (SETA) support for IAMD CPMR, Air & Cruise Missile Defense (ACMD), Ballistic Missile Defense (BMD), Homeland Air Security (HAS) strategic planning, studies & analysis, combat ID, modeling & simulation. 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. *FY 2024 Plans:* Continue to expand efforts to develop joint integrated air and missile defense (IAMD) requirements solutions via the IAMD Capability Portfolio Management Review and the Joint Integrated Priority List. Conduct IAMD Study to explore military utility assessment of future IAMD architectures. *FY 2025 Plans:* Continue to expand efforts to develop joint integrated air and missile defense (IAMD) requirements solutions via the IAMD Capability Portfolio Management Review and the Joint Integrated Priority List. Conduct IAMD Study to explore military utility assessment of future IAMD architectures. *FY 2024 to FY 2025 Increase/Decrease Statement:* Minor programmatic increase to comply with the Department's economic assumptions.			
Accomplishments/Planned Programs Subtotals	16.911	14.170	15.577

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 2025 The Joint Staff | **Date:** March 2024

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*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
P005: *Nimble Fire*	178.758	13.797	18.343	27.301	-	27.301	32.657	32.791	30.537	25.337	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is chartered to plan, coordinate, and oversee Integrated Air and Missile Defense (IAMD) requirements, concepts, and 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 IAMD proponent for requirements and capabilities within the DoD's resource allocation system. JIAMDO leads IAMD mission and utility analysis, integrates IAMD within the force protection joint capability area, and conducts evaluations of joint IAMD architectures.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains close coordination with U.S. Space Command (USSPACECOM), U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of 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. JIAMDO develop the IAMD prioritized capabilities list and the global integrated IAMD assessment and analysis of the Ballistic Missile Defense System. JIAMDO supports the USSPACECOM and USSTRATCOM 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 homeland defense solutions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: JIAMDO Nimble Fire	13.797	18.343	27.301
Description: Nimble Fire is the Department's only IAMD operator-in-the-loop modeling and simulation capability supporting 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 generally explore joint IAMD capabilities and concepts in the FYDP plus two timeframe. The events combine 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 based on the Department's analytical agenda and CCMD operational plans. JIAMDO brings together stakeholders across the engineering, analytical, and tactical communities to assess Joint interoperability of Service and MDA programs of record, explore concepts of employment, inform tactics, 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.

FY 2024 Plans: | | | |

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
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*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Modest increase to restore NIMBLE FIRE funding levels to projected costs of executing two NIMBLE FIRE events and multi-domain upgrades to the environment. Multi-domain primarily refers to space, attack or offensive operations, cyber effects and unmanned systems. ***FY 2025 Plans:*** Maintain NIMBLE FIRE funding levels to projected costs of executing two NIMBLE FIRE events and multi-domain upgrades to the environment. Increased support to other Service or agency events executing within same venue as NIMBLE FIRE events. Multi-domain primarily refers to space, attack or offensive operations, cyber effects, electronic warfare and unmanned systems. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increased support to NIMBLE FIRE activities.to fund hardware, software, and security enhancements for the NIMBLE FIRE exercise series to conduct Operator-In-The-Loop exercises and simulations in a realistic environment to support joint force training.			
Accomplishments/Planned Programs Subtotals	13.797	18.343	27.301

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 2025 The Joint Staff		**Date:** March 2024

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 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
P006: *Cruise Missile Combat Identification (CID)*	93.357	3.911	5.211	5.275	-	5.275	5.321	5.474	5.584	5.584	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is chartered to plan, coordinate, and oversee Integrated Air and Missile Defense (IAMD) requirements, concepts, and 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 IAMD proponent for requirements and capabilities within the DoD's resource allocation system. JIAMDO leads IAMD mission and utility analysis, integrates IAMD within the force protection joint capability area, and conducts evaluations of joint IAMD architectures.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains close coordination with U.S. Space Command (USSPACECOM), 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. JIAMDO supports the USSPACECOM and 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 homeland defense solutions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Cruise Missile Combat Identification (CID)	3.911	5.211	5.275
Description: Establishes joint requirements for emerging national and tactical combat identification technology and advocates for fielding CID technology to frontline weapon systems. Monitors, assesses, and enhances current joint air and cruise missile defense combat ID programs. *FY 2024 Plans:* Details of this program are classified and will be provided under a separate cover. *FY 2025 Plans:* Details of this program are classified and will be provided under a separate cover. *FY 2024 to FY 2025 Increase/Decrease Statement:* Minor programmatic increase to comply with economic assumptions.			
Accomplishments/Planned Programs Subtotals	3.911	5.211	5.275

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
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)*

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

D. Acquisition Strategy
 N/A

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Appropriation/Budget Activity 0400 / 6				R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)					Project (Number/Name) P007 / Homeland Defense Capability		

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
P007: Homeland Defense Capability	61.448	16.578	22.120	22.153	-	22.153	21.969	22.117	22.560	22.560	-	-
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 2023	FY 2024	FY 2025
Title: Homeland Defense Capability	16.578	22.120	22.153
Description: Develop Homeland Defense Capability **FY 2024 Plans:** Continue to perform technology development efforts. Further details are reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress. **FY 2025 Plans:** Continue to perform technology development efforts. Further details are reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress. **FY 2024 to FY 2025 Increase/Decrease Statement:** Minor programmatic increase to comply with economic assumptions.			
Accomplishments/Planned Programs Subtotals	16.578	22.120	22.153

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 2025 The Joint Staff										**Date:** March 2024	

Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0605126J *I Joint Integrated Air & Missile Defense Organization (JIAMDO)*	**Project (Number/Name)** P008 *I Joint Regional Integrated Air and Missile Defense Capabilities Mix (JRICM)*

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
P008: *Joint Regional Integrated Air and Missile Defense Capabilities Mix (JRICM)*	0.000	0.000	1.633	1.699	-	1.699	1.766	1.837	1.911	1.911	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Annual support to the Joint Regional Integrated Air and Missile Defense Capabilities Mix (JRICM) study.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: JRICM Study	-	1.633	1.699
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 defense capabilities (kinetic and non-kinetic) in the 2030 timeframe. **FY 2024 Plans:** 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 2025 Plans:** 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 2024 to FY 2025 Increase/Decrease Statement:** Minor programmatic increase to comply with economic assumptions.			
Accomplishments/Planned Programs Subtotals	-	1.633	1.699

C. Other Program Funding Summary ($ in Millions)

N/A

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0605126J *I Joint Integrated Air & Missile Defense Organization (JIAMDO)*	**Project (Number/Name)** P008 *I Joint Regional Integrated Air and Missile Defense Capabilities Mix (JRICM)*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy
 N/A

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Exhibit R-2, **RDT&E Budget Item Justification:** PB 2025 The Joint Staff											**Date:** March 2024	

Appropriation/Budget Activity
0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*

R-1 Program Element (Number/Name)
PE 0204571J *I Joint Staff Analytical Support*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	68.476	2.946	4.916	7.433	-	7.433	8.860	4.900	4.900	4.900	Continuing	Continuing
P001: *Future Joint Force Development and Design*	68.476	2.946	4.916	7.433	-	7.433	8.860	4.900	4.900	4.900	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) family of programs provide defense analytical support capabilities for the Joint Staff and Combatant Commands (CCMDs). JSAS encompasses tools and infrastructure required to conduct analyses and formulate results that assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include development of Joint Concepts, concepts of operation, innovative operational concept assessments, course of action development for the future joint force operating environment, analyses and studies for joint concept driven, threat-informed capability development approach to joint force development to aid in decision-making, and other analysis efforts to implement timely, low-cost joint force development initiatives.

B. Program Change Summary ($ in Millions)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	2.946	4.916	6.433	-	6.433
Current President's Budget	2.946	4.916	7.433	-	7.433
Total Adjustments	0.000	0.000	1.000	-	1.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Training Enhancement	-	-	1.000	-	1.000

Change Summary Explanation

Increased funding for Logbook Next. Supports the FY 2024 - 2026 development of Logbook-Next to deliver a modernized requirements-gathering, collaborative staffing, and Global Force Management (GFM) allocation workflow capability providing the Secretary of Defense sourcing solutions from which to initiate deployment orders, replacing the current, legacy Events Logbook and Joint Capability Requirements Manager (JCRM) mission-enabling technologies that have been in use in their current form since 2002. Increased funding to support Department wide Joint Training efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										**Date:** March 2024	

Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / *Joint Staff Analytical Support*				Project (Number/Name) P001 / *Future Joint Force Development and Design*		

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
P001: *Future Joint Force Development and Design*	68.476	2.946	4.916	7.433	-	7.433	8.860	4.900	4.900	4.900	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) program supports the Chairman's Title 10 responsibility for the analytical support, management, and development of future-based joint concepts. These threat based Joint concepts include Joint concepts of operations that advance Joint Force operational effectiveness and enable the introduction and incorporation of new capabilities. The Joint Concepts program supports the Chairman's responsibility to express a 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 goal is to enable investment decisions balancing near and long-term risk. Threat-informed joint concepts drive capability development and promote horizontal integration for force development across the Services, Combatant Commands, Defense agencies, OSD and Joint Staff. Key deliverables include:

Joint Warfighting Concept (JWC) - Next: Further identifies innovative and alternative approaches and design options and concept required capabilities for the employment of the Joint Force out to 2040.

Concepts of Operations (CONOPS): Describe how the actions of the joint force components and supporting organizations are integrated, synchronized, and phased to accomplish a specific mission, war plan or function within the construct of a future scenario. CONOPS support evaluation of new ways of operating, future force posture mix, advanced capabilities, and authorities in exercises, wargames, and experiments.

Joint Operating Environment (JOE) and the Gamechangers report: Developed in partnership with DIA, this report describes the future security environment and projects the implications of change for the Joint Force. The documents describe the circumstances that may alter the security environment and explores how the intersection and interaction of these changes might impact the character of war in the future. They provide a framework to think about the full range of Joint Force missions and how they may evolve over time to support development of threat-based future Joint concepts and CONOPS.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Future Joint Force Development and Design	2.946	4.916	7.433
Description: Future Joint Force Development and Design provides analytic support required to develop future-based joint concepts. The goal is to enable investment decisions balancing near and long- term risk. Threat-informed joint concepts drive capability development and promote horizontal integration for force development and design across the Services, Combatant Commands, Defense agencies, OSD and Joint Staff. *FY 2024 Plans:*			

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0204571J *I Joint Staff Analytical Support*	**Project (Number/Name)** P001 *I Future Joint Force Development and Design*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Execute the Chairman's Joint Concepts Program. Support the execution of the FY 2024 Globally Integrated War Game. Complete updated version of Joint Warfighting Concept – Next 2040. Continue global CONOPS development to support evaluation of joint concepts in exercises, war games, and experimentation. Support to Logbook Next efforts to deliver a modernized requirements-gathering, collaborative staffing, and Global Force Management (GFM) allocation workflow capability. *FY 2025 Plans:* Execute the Chairman's Joint Concepts Program. Support the execution of the FY 2025 Globally Integrated War Game. Complete updated version of Joint Warfighting Concept – Next. Continue global CONOPS development to support evaluation of joint concepts in exercises, war games, and experimentation. *FY 2024 to FY 2025 Increase/Decrease Statement:* Increased funding to Logbook Next, to deliver a modernized requirements-gathering, collaborative staffing, and Global Force Management (GFM) allocation workflow capability.			
Accomplishments/Planned Programs Subtotals	2.946	4.916	7.433

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

D. Acquisition Strategy
 N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff											Date: March 2024	

Appropriation/Budget Activity	R-1 Program Element (Number/Name)
0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*	PE 0305248J *I Joint Staff Office of the Chief Data Officer*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	12.700	-	12.700	14.500	14.900	15.200	16.500	Continuing	Continuing
001: *Joint Staff Dashboard / CJCS Decision Support Capabilities*	-	-	-	12.700	-	12.700	14.500	14.900	15.200	16.500	Continuing	Continuing

Note

This is a new Joint Staff (JS) Program Element Code established in 2023, effective beginning in FY 2025, for Joint Staff Office of the Chief Data Officer (OCDO) Activities.

A. Mission Description and Budget Item Justification

Provides funds for the operation and support of activities directly related to the Joint Staff (JS) Office of the Chief Data Officer (OCDO) mission to enable data-centric efforts across the JS. This includes concept refinement, technology/system development, hardware/software requirements, training, and other activities necessary for OCDO to facilitate the linkages and integration of authoritative data flows between the Joint Staff, Combatant Commands (CCMDs), Services, and Office of the Secretary of Defense (OSD). In collaboration with each of the Joint Staff Directorates, the OCDO advances data interoperability and strengthens leadership on data governance to ensure that digital systems can fully support Combined Joint All-Domain Operations. As the Joint Staff focal point for data-centric efforts, on behalf of the Chairman, the JS OCDO also works closely with the Office of the Secretary of Defense (OSD) Chief Digital and Artificial Intelligence Officer (CDAO) to communicate and represent the Joint Staff and Chairman's requirements necessary to develop sustained information advantage capabilities to enable senior leader decision-making and action at the speed of the problem.

B. Program Change Summary ($ in Millions)

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	12.700	-	12.700
Total Adjustments	0.000	0.000	12.700	-	12.700
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Decision Support Capabilities Dashboard	-	-	12.700	-	12.700

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0305248J *I Joint Staff Office of the Chief Data Officer*	

<u>Change Summary Explanation</u>

This is a new Joint Staff (JS) Program Element Code established in 2023, effective beginning in FY 2025, for Joint Staff Office of the Chief Data Officer (OCDO) Activities.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff											Date: March 2024	
Appropriation/Budget Activity 0400 *I* 6					**R-1 Program Element (Number/Name)** PE 0305248J *I Joint Staff Office of the Chief Data Officer*				**Project (Number/Name)** 001 *I Joint Staff Dashboard / CJCS Decision Support Capabilities*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
001: *Joint Staff Dashboard / CJCS Decision Support Capabilities*	-	-	-	12.700	-	12.700	14.500	14.900	15.200	16.500	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Data and analytics are the foundation necessary to create the critical data-driven applications and artificial intelligence (AI) systems needed to build enduring advantages for the Joint Force to remain competitive with pacing adversaries. However, recent events have demonstrated that the DoD's capabilities in data, analytics, and AI need further development.

Specifically for the Joint Staff, this means developing and testing JS-specific software applications (use cases) to achieve the Chairman of the Joint Chiefs of Staff's (CJCS) and the Vice Chairman of the Joint Chiefs of Staff's (VCJCS) requirement for a Senior Leader Decision Support Capabilities . The CJCS has a statutory responsibility to provide best military advice (BMA) to the President, the National Security Council, the Homeland Security Council, and the Secretary of Defense. These decision support capabilities and the associated dashboard interface directly support the CJCS's BMA through interaction with integrated, real-time authoritative data, enabling data-driven decision making.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Joint Staff Dashboard / CJCS Decision Support Capabilities	-	-	12.700

Description: The JS OCDO, in coordination with Office of Secretary of Defense (OSD) Chief Digital and Artificial Intelligence Officer (CDAO), will develop JS workflow automation and business intelligence applications to address Departmental challenges regarding data accuracy and accessibility. This includes developing and testing JS-specific software applications or use cases to support the Chairman's statutory responsibility to provide best military advice (BMA) to the President, the National Security Council, the Homeland Security Council, and the Secretary of Defense. These JS Dashboard use cases will be part of the CDAO's DoD Enterprise Application Layer interacting with the Data Integration Layer (DIL); ensuring that these applications as they are developed are fully interoperable with existing Joint and Service data analytics platforms (e.g., Advana cloud, Advana Edge, SUNet, Maven Smart Systems (MSS), and Army Vantage).

FY 2025 Plans:
To achieve necessary Joint Staff senior leader decision support capabilities, the Dashboard will be built upon a JS Application Layer integrated with CDAO's Combined Joint All-Domain Command and Control (CJADC2) DIL. Initially focusing on three priority use cases identified below as Lines of Effort (LOE). Over time, additional use cases will be added to support a comprehensive, cross-directorate Dashboard capability:

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0305248J *I Joint Staff Office of the Chief Data Officer*	**Project (Number/Name)** 001 *I Joint Staff Dashboard / CJCS Decision Support Capabilities*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
1. LOE 1: Digitizing and automating workflows and analytics for the Secretary of Defense Orders Book (SDOB) for Global Force Management (GFM), including global integration features for Combatant Command (CCMD)/Service readiness and Operations, Activities, and Investments (OAI), and Joint Force readiness data. 2. LOE 2: Supporting the Crisis Management Team (CMT) in the National Military Command Center by overlaying the Common Operating Pictures (COP), Common Intelligence Pictures (CIP), and working real-time assessments during 24/7 crisis response efforts. 3. LOE 3: The Joint Requirements Oversight Council (JROC) Data Modernization. This LOE will improve data accessibility and data retrieval from Knowledge Management and Decision Support (KM/DS), the primary support tool for the Joint Requirements Oversight Council and Joint Capabilities Integration and Development System (JCIDS) process. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increased funding to develop decision support capabilities.			
Accomplishments/Planned Programs Subtotals	-	-	12.700

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

D. Acquisition Strategy
 The JS Dashboard development effort will continue to leverage CDAO enterprise tools, the DoD Federated Data Catalog, and integrate with Mission Command
 Applications. Although the Joint Staff Dashboard is nested with CDAO's enterprise solutions, it encompasses unique Joint Staff Title 10 functions and requirements
 to support the National Command authority. Accordingly, Joint Staff-unique Dashboard development efforts will be developed in line with DoD Instruction 5000.87,
 Software Acquisition Pathway guidance. Specifically, utilizing development of Joint Staff cases within DevSecOps environments to deploy data automations, workflows,
 modeling, meta data management, data ontologies, user interface/experience design (UI/UX) and engineering and human-centered design contract support.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff										**Date:** March 2024	

Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	131.189	32.540	101.319	166.021	-	166.021	168.629	113.197	97.746	100.909	Continuing	Continuing
701: *Air Force Joint National Training Capability (JNTC)*	11.028	2.409	2.579	3.156	-	3.156	3.156	3.156	3.156	3.156	Continuing	Continuing
758: *Joint National Training Capability (JNTC)*	100.576	27.872	26.329	15.926	-	15.926	15.926	15.926	15.926	15.926	Continuing	Continuing
769: *Joint Knowledge Development & Distribution Capability (JKDDC)*	4.668	0.313	0.808	0.808	-	0.808	0.808	0.808	0.808	0.808	Continuing	Continuing
772: *Navy Joint National Training Capability (JNTC)*	11.921	1.678	3.165	3.165	-	3.165	3.160	3.165	3.165	3.165	Continuing	Continuing
774: *USMC Joint National Training Capability (JNTC)*	2.996	0.268	0.268	0.268	-	0.268	0.268	0.268	0.268	0.268	Continuing	Continuing
777: *Large Scale Global Exercise (LSGE)*	0.000	0.000	5.170	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
779: *Joint Staff Live, Virtual and Constructive (JLVC) Modernization*	0.000	0.000	63.000	142.698	-	142.698	145.311	89.874	74.423	77.586	Continuing	Continuing

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, Joint Operational Training Infrastructure strategy, and enhance joint warfighting readiness by building training capabilities that support the operational readiness of the joint force. The elements associated with this coordinated effort consist of:

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 to improve interoperability and create realistic tactical and operational joint training. 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 joint forces in support of Combatant Command operational requirements. The program supports the Joint Operational Training Infrastructure (JOTI). This program focuses efforts on improving readiness and creates a ready surge force consistent with Chairman's guidance and will provide the means to train joint forces for the operationalization of the Joint Warfighting Concept.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I BA 6:* *RDT&E Management Support*		**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*

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 JTEEP 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, JTEEP program objectives, and the Chairman's joint training guidance. JKO satisfies all requirements necessary to provide JTEEP stakeholders with a distributed learning capability and access to web-based training content, learning resources, and distributed online training tools.

Air Force Joint National Training Center (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 as well supporting development of cross-domain solutions. Additionally, the Air Force invests in development of capabilities to enhance the rigor and fidelity of training for live and virtual members of joint training audiences.

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, and integration of a common, realistic, joint and coalition, operational to tactical level training architecture to deliver individual and collective constructive joint training for use in Fleet Synthetic Training (FST) events, CCDR exercises, Ballistic Missile Defense Exercises (BMDEX) certification events, and BMD at Sea training events in support of CCDR's training, deployment certification and operational requirements.

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. Efforts align with JOTI Strategy Goal #1, Improve the use of LVC training and support 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 will provide a single source training environment capability enabling users to select single or multiple play boxes (terrain data sets) for training simulation systems. Also developing an exercise planning, design, implementation, execution, and control tool.

LSGE: Large Scale Global Exercises (LSGE) initiative facilitates LVC technical projects, architecture integration, and interface development required to enable Field Training Exercises (FTX) and Command Post Exercises (CPX) to achieve LGSE objectives. During LSGE execution, CCMD exercises as part of the JTEEP, tier 3 and 4 FTX exercises are frequently nested within the overall Tier 1 and 2 CPX exercises. Integrating LVC within FTX tactical exercise and CPX operational exercise requires new development efforts for LVC capabilities, LVC architectures, datasets, integration, and interfaces to create an LVC operational environment for training. This funding will address refining LVC requirements, architecture design, new integrations, and capability and interface development to close joint operational training gaps critical to LSGE joint training. This targets the integration of the Military Service Title X LVC training to enable LGSE LVC joint training.

Joint Staff Live, Virtual and Constructive Modernization: This funding supports the Department's priorities to defend the homeland, deter strategic attacks and aggression, prevail in conflict, build enduring advantage, and build a resilient and ready joint force and defense eco system. China has greatly increased the urgency for realism of joint training using JLVC to improve readiness and interoperability, unearth operational weaknesses to train a joint force to key operational problems. The Joint Live, Virtual and Constructive (JLVC) Modernization project seeks out, develops, and integrates training technologies to provide a reliable, realistic, relevant, repeatable,

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Exhibit R-2, **RDT&E Budget Item Justification:** PB 2025 The Joint Staff		**Date:** March 2024
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and recordable training environment to train joint warfighters to successfully execute operational plans (OPLANs). Through analysis driven by a threat-informed China task force study in 2022, the Joint force lacks the training enterprise capability and technical architecture required to provide all-domain, high-end training for globally operations. Aligned with the National Defense Strategy, JLVC Modernization is critical to ensure the Department of Defense (DoD) can close joint operational training gaps, provide a key enabler for the Pacific Multi-Domain Training and Experimentation Capability, provide training for advanced systems that cannot be realistically trained in live environments, provide training for future capabilities the force must be prepared to employ, and to build the readiness of a more lethal force. To meet this objective, the JLVC Modernization project performs the following activities:
• Exploit new technologies and leverage industry advances in equipment, modeling and simulation, and networks support the joint training enterprise
• Expedite the transition and integration of new training technologies (simulations, network, range integration) from Services, Industry, and Academic environments to the joint training enterprise
• Establish data standards to enable the transition to a data-centric architecture, aligned to CJADC2, ensuring consistency and provide 'analytic ready' data to support all domain training; implement Joint LVC interoperability standards to enable all domain joint force training across LVC training ranges
• Develop and integrate a fully-informed (Program to S/REL) Space, Cyber, Electromagnetic Spectrum (EMS), and 5th/6th Gen synthetic capabilities for the joint training enterprise
• Work with CCMDs and Services to optimize existing service programs while beginning to develop Next Generation simulations and simulators that are inherently interoperable across warfighting and security domains
• Advance the use of innovative applications of Artificial Intelligence for scenario generation, dynamic threat, smart opposing force (OPFOR), and after-action review (AAR) for the joint training enterprise

Additionally, the JLVC Modernization project examines emerging joint training requirements resulting from new operational concepts, wargames, experiments, and exercises to identify training technology needs and develop a long-range roadmap for technology insertion into the joint training enterprise. The project leverages and employs applicable applied research efforts from the highly developed technology base in the DoD/DOE laboratories, Service System engineering Centers, test and evaluation centers, other Government agencies, and industry to accelerate development and integration of new training capabilities. The project outreaches and engages Academia to address joint training technology challenges in DoD. This program provides travel funds for JLVC Modernization project oversight, special studies, analyses, and strategic planning related to modernization of training capabilities and infrastructure.

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 The Joint Staff				**Date:** March 2024	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 6: *RDT&E Management Support*			**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*		
B. Program Change Summary ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Previous President's Budget	32.540	101.319	177.967	-	177.967
Current President's Budget	32.540	101.319	166.021	-	166.021
Total Adjustments	0.000	0.000	-11.946	-	-11.946
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Reduction	-	-	-11.946	-	-11.946

Change Summary Explanation

Congressional defense-wide reduction to Federally Funded Research and Development Center (FFRDC) funding, and a directed Congressional reduction (-3.991M) to this Program Element in FY 2023. Increased FY 2024 funding reflects the Secretary's direction on the Large Scale Global Exercise (LSGE), funding for Joint Staff Joint Live, Virtual and Constructive (JLVC) modernization, and a minor adjustment to comply with the Department's economic assumptions. Primary focus of the LSGE program is to ensure the joint training synthetic environment is optimized and responsive for the coordinating authority to conduct LSGE at a time and place of their choosing uninhibited by current training architecture shortfalls. JLVC Modernization project focus is to modernize joint LVC-enabled training to provide realism for a China threat to present the complex key operational problems the joint force may face in protracted crisis or conflict. The project will modernize the entire JLVC synthetic training environment after 15+ years of 'life support' sustainment, as our warfighting capabilities evolved and modernized. The life support sustainment has left critical joint operational training gaps, identified in the China Task Force Study, that seriously impacts the joint force's ability to conduct realistic and relevant Joint training against a China threats. JLVC Modernization is a VCJCS and OSD priority, and 2022 Deputy Secretary of Defense directed project to begin the modernization to begin realistically representing current and future friendly and enemy capabilities in all domains to enable joint warfighters to successfully train to conduct globally operations. JLVC Modernization transitions our synthetic environment to a modern data-centric modular open systems architecture that aligns to DoD IT Modernization, Data, and Zero Trust Strategies.

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff										Date: March 2024	
Appropriation/Budget Activity 0400 *I* 6					**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*				**Project (Number/Name)** 701 *I Air Force Joint National Training Capability (JNTC)*		
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
701: *Air Force Joint National Training Capability (JNTC)*	11.028	2.409	2.579	3.156	-	3.156	3.156	3.156	3.156	3.156	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Air Force JNTC funding provides a focused upgrade to develop models for employment of cyber and 5th generation capabilities for integration into the Joint Live, Virtual, and Constructive (JLVC) environment as well as supporting development of cross-domain solutions. Additionally, the Air Force invests in development of capabilities to enhance the rigor and fidelity of training for live and virtual members of joint training audiences.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Air Force Joint National Training Capability (JNTC)	2.409	2.579	3.156
Description: Air Force continues to develop joint enablers that drive realistic/effective training in contested and degraded environments across the JTEEP/CE2T2 enterprise. These capability enhancements provide a thinking and reactive Opposing Force (OPFOR) to challenge and engage both live and virtual Blue Forces using a combination of kinetic, non-kinetic, and cyber capabilities. Additionally, it continues to build upon prior investments in the cyber and space domains by improving fidelity of synthetic environments, ability to portray and control blue, red, and neutral entities and effects, interoperability with other Service, joint, and JLVC federation models and simulations, and support of JTEEP/CE2T2 mission partners. It also builds on prior investments in the One War Training System (OWTS) to enhance exercise control, safety, and feedback to training audiences in blended live and synthetic air and land domains. *FY 2024 Plans:* 1. Continue to develop capabilities for live OPFOR surface-to-air threats to engage virtual as well as live Blue Force (BLUFOR) aircraft. 2. Sustain development of and enhance new capabilities for integration of the cyber simulator environment generator and "blue" cyber effects simulation. Further develop the capabilities of the Joint Electric Power Range (JEPR) to ensure the Joint community has access to a high-fidelity, configurable, targetable electrical power distribution grids in order to support training for Joint ISR analysts, EW systems, cyber operators and campaign planners while enhancing infrastructure attack capabilities and defensive measures. 3. Sustain development of and enhance new all-domain, full-spectrum operations capabilities against adversary-representative control systems (CS) which support adversary war making capabilities such as POL and chemical production, power generation/			

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Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff				Date: March 2024		

Appropriation/Budget Activity 0400 *I* 6	R-1 Program Element (Number/Name) PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	Project (Number/Name) 701 *I Air Force Joint National Training Capability (JNTC)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
distribution, etc. Adversary CS replication provides enhanced planning and employment of integrated kinetic, EW, cyber, and ISR assets to achieve desired effects against adversary CS through all domains. 4. Sustain development of an enhanced anechoic chamber to support controlled RF exercise events during all-domain Joint training enabling the execution of cost-effective, high-impact, timely and scoped training and exercising of integrated or converged technologies that will provide significant insight to the joint cyber/EW community and to the warfighter. *FY 2025 Plans:* 1. Continue to develop capabilities for live OPFOR surface-to-air threats to engage virtual as well as live Blue Force (BLUFOR) aircraft. 2. Sustain development of and enhance new capabilities for integration of the cyber simulator environment generator and "blue" cyber effects simulation. Further develop the capabilities of the Joint Electric Power Range (JEPR) to ensure the Joint community has access to a high-fidelity, configurable, targetable electrical power distribution grids in order to support training for Joint ISR analysts, EW systems, cyber operators and campaign planners while enhancing infrastructure attack capabilities and defensive measures. 3. Sustain development of and enhance new all-domain, full-spectrum operations capabilities against adversary-representative control systems (CS) which support adversary war making capabilities such as POL and chemical production, power generation/ distribution, etc. Adversary CS replication provides enhanced planning and employment of integrated kinetic, EW, cyber, and ISR assets to achieve desired effects against adversary CS through all domains. 4. Sustain development of an enhanced anechoic chamber to support controlled RF exercise events during all-domain Joint training enabling the execution of cost-effective, high-impact, timely and scoped training and exercising of integrated or converged technologies that will provide significant insight to the joint cyber/EW community and to the warfighter. *FY 2024 to FY 2025 Increase/Decrease Statement:* Increases in this program are to support the Secretary of Defense's Joint Training Infrastructure Goals in JTEEP programs.			
Accomplishments/Planned Programs Subtotals	2.409	2.579	3.156

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

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
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D. Acquisition Strategy
 N/A

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff											**Date:** March 2024	
Appropriation/Budget Activity 0400 *I* 6					**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*					**Project (Number/Name)** 758 *I Joint National Training Capability (JNTC)*		
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
758: *Joint National Training Capability (JNTC)*	100.576	27.872	26.329	15.926	-	15.926	15.926	15.926	15.926	15.926	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 as part of the overall Joint Force. JNTC provides the technical standards, architecture, and development processes required to integrate/link joint training enablers in programs across the Department of Defense. The capabilities enable simultaneous training at scale, with aggregation of training audiences at the Combatant Command, Joint Task Force, Component Command headquarters, and Service tactical levels. The funding also supports modernization of the Joint Training Environment (JTE) through a Modular Open Systems Architecture (MOSA) approach to include development of a cloud-enabled, web-accessible Joint Training Tool (JTT) that supports all phases of an exercise (planning and design, execution, and AAR). The JTT will increase warfighter access to semi-automated training enablers within the Joint Training Synthetic Environment (JTSE). The JTT will also modernize the automation the Joint Training System (JTS) by incorporating current Joint Training Information Management System (JTIMS) capability, with a focus on data centricity, as outlined in the DoD Data Strategy. JNTC enables the Department of Defense to train the Joint Force on the operationalization of the current and future Joint Warfighting Concept, and provides more effective training by providing capabilities that replicate the contemporary and future operating environment. This program will implement the goals listed in the Joint Operational Training Infrastructure (JOTI).

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Joint National Training Capability (JNTC)	27.872	26.329	15.926
Description: JNTC provides the technical standards, architecture, and development processes required to integrate/link joint training enablers in programs across the Department of Defense. The capabilities enable simultaneous training at scale, with aggregation of training audiences at the Combatant Command, Joint Task Force, Component Command headquarters, and Service tactical levels. The funding also supports modernization of the Joint Training Environment (JTE) through a Modular Open Systems Architecture (MOSA) approach to include development of a cloud-enabled, web-accessible Joint Training Tool (JTT) that supports all phases of an exercise (planning and design, execution, and AAR). The JTT will increase warfighter access to semi-automated training enablers within the Joint Training Synthetic Environment (JTSE). The JTT will also modernize the automation the Joint Training System (JTS) by incorporating current Joint Training Information Management System (JTIMS) capability, with a focus on data centricity, as outlined in the DoD Data Strategy.			
FY 2024 Plans: 1. Continue Expand capability of cloud-based, web-enabled JTT exercise design and planning and execution modules, furthering use as the primary tool supporting Tier 1 and Tier 2 joint training exercise, and enabling synchronization of linked Tier 3 and Tier 4 exercises.			

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
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B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
2. Continue development of JTIMS capability within JTT.			
3. Continue to develop additional capability within planned persistent simulation service of web-enabled, modular JTT and test against first CCMD use-cases.			
4. Continue to enhance joint simulation (within JLVC) to keep pace with operational environment changes (annual requirement).			
5. Support the Joint Operation Training infrastructure goals.			
FY 2025 Plans: 1. Continue Expand capability of cloud-based, web-enabled JTT exercise design and planning and execution modules, furthering use as the primary tool supporting Tier 1 and Tier 2 joint training exercise, and enabling synchronization of linked Tier 3 and Tier 4 exercises.			
2. Continue development of JTIMS capability within JTT.			
3. Continue develop additional capability within planned persistent simulation service of web-enabled, modular JTT and test against first CCMD use-cases.			
4. Continue to enhance joint simulation (within JLVC) to keep pace with operational environment changes (annual requirement).			
5. Support the Joint Operation Training infrastructure goals.			
FY 2024 to FY 2025 Increase/Decrease Statement: Adjustments to support the Secretary of Defense's Joint Training Goals. JTT continues to integrate Joint Training Information Management System (JTIMS) functionality into the Joint Training Tool (JTT), there has be no defined cost savings until JTIMS functionality is released in the production environment. Major software development activity was accomplished, resulting in efficiencies and a lower operating cost.			
Accomplishments/Planned Programs Subtotals	27.872	26.329	15.926

C. Other Program Funding Summary ($ in Millions)

 N/A

Remarks

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D. Acquisition Strategy N/A		

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| **Appropriation/Budget Activity**
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PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)* | | | | **Project (Number/Name)**
769 *I Joint Knowledge Development & Distribution Capability (JKDDC)* | | |

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
769: *Joint Knowledge Development & Distribution Capability (JKDDC)*	4.668	0.313	0.808	0.808	-	0.808	0.808	0.808	0.808	0.808	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 training guidance, Joint Staff training priorities, and JKO stakeholders (Combatant Commands, Services, Combat Support Agencies, Interagency, and multinational partners) prioritized training requirements. JKO supports a career-long joint learning continuum, joint professional military education, and tailored common training standards to Service members on tasks that are jointly executed. JKO's research and development will improve all components of the Joint Total Learning Architecture (JTLA) including:

1. JKO Learning Management System (LMS): 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. There are currently over 4.5 million registered users of the JKO LMS.

2. JKO Course Builder: JKO's Course Builder is a separate component used for organizations to develop online content by both internal and external joint enterprise teams. Course Builder mitigates the need to have programmer's code Shareable Content Object Reference Model (SCORM) standards into content with automation that promotes fiscal efficiency as well as operational responsiveness. Course Builder will advance to support new JKO Content Development techniques including responsive design, micro-learning, parallax scrolling and adaptive learning methodology.

3. 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. JKO integration of SGST simulation exercise scenarios and prerequisite JKO courses significantly enhance blended learning training support to large-scale, collective training exercises.

4. JKO Virtual Classroom (VC LASS): JKO's new virtual classroom, or VCLASS, meets the need for an enhanced distributed learning capability with the introduction of a collaborative learning environment. VCLASS is a customizable platform within JKO's architecture and that provides JKO elevated users the tools to meet the unique needs of DoD's training and education audience by providing online/blended course support with syllabus, messaging, gradebook, resources, announcements and synchronous instructional forums.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Joint Knowledge Development & Distribution Capability (JKDDC)	0.313	0.808	0.808

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 769 *I Joint Knowledge Development & Distribution Capability (JKDDC)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Description: Joint Knowledge Online (JKO) advance technology initiatives primarily include the JKO Learning Management System (LMS) application, Course Builder, Small Group Scenario Trainer (SGST) desktop modeling and simulation based training capability, and Virtual Classroom, 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 Joint and Combined/Joint Task Force (C/JTF) billets. JKO LMS 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" and combatant command (CCMD) personnel will be better trained, as individuals and as staffs, based on joint courses, SGST, VCLASS development, and implementation throughout the joint training enterprise. *FY 2024 Plans:* Continue to integrate and expand the virtual classroom (VCLASS opensource capability (Sakai) into the Global Content Distribution System (GCDS) and the JKO LMS suite of tools for synchronous (live) and asynchronous instructor-led training. Integrate JTLA for component tools such as LMS, Coursebuilder, SGST, and VCLASS in support of advanced content and development techniques such as micro-learning, parallax scrolling, and Adaptive Learning Methodology. Continue extension of micro learning technology, xAPI adaptation, Learning Record Store and Adaptive Learning Methodology to increase personalization capability of learning content. Increasing personalization capability delivers self-regulated micro-learning training that is designed to be engaging, usable and practical, allowing individuals to quickly access desired learning content whenever an opportunity arises. As DoD organizations increase training via DL opportunities, the methodologies of developing and delivering DL must be cutting edge, timely and optimize the learning experience of the joint warfighter. JKO content development advancements are allowing individuals to quickly access desired learning content whenever an opportunity arises. Continue to build out FVEY access and integrate JWICS military networks. *FY 2025 Plans:* Continue to integrate and expand the virtual classroom (VCLASS opensource capability (Sakai) into the Global Content Distribution System (GCDS) and the JKO LMS suite of tools for synchronous (live) and asynchronous instructor-led training. Integrate JTLA for component tools such as LMS, Coursebuilder, SGST, and VCLASS in support of advanced content and development techniques such as micro-learning, parallax scrolling, and Adaptive Learning Methodology. Continue extension of micro learning technology, xAPI adaptation, Learning Record Store and Adaptive Learning Methodology to increase personalization capability of learning content. Increasing personalization capability delivers self-regulated micro-learning training that is designed to be engaging, usable and practical, allowing individuals to quickly access desired learning content whenever an opportunity arises. As DoD organizations increase training via DL opportunities, the methodologies of developing and delivering DL must be cutting edge, timely and optimize the learning experience of the joint warfighter. JKO content development			

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 769 *I Joint Knowledge Development & Distribution Capability (JKDDC)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
advancements are allowing individuals to quickly access desired learning content whenever an opportunity arises. Continue to build out FVEY access and integrate JWICS military networks. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Minor adjustments to support the Secretary of Defense's Joint Training Infrastructure Goals.			
Accomplishments/Planned Programs Subtotals	0.313	0.808	0.808

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 2025 The Joint Staff										**Date:** March 2024	
Appropriation/Budget Activity 0400 *I* 6				**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*				**Project (Number/Name)** 772 *I Navy Joint National Training Capability (JNTC)*			

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
772: *Navy Joint National Training Capability (JNTC)*	11.921	1.678	3.165	3.165	-	3.165	3.160	3.165	3.165	3.165	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, and integration of a common, realistic, joint and coalition, operational to tactical level training architecture to deliver individual and collective constructive joint training for use in Fleet Synthetic Training (FST) events, Combatant Commander (CCDR) exercises, Ballistic Missile Defense Exercises (BMDEX) certification events, and BMD at Sea training events in support of CCDR's training, deployment certification and operational requirements.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Title: Navy Joint National Training Capability (JNTC)	1.678	3.165	3.165

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. This program provides a current and emerging multi-functional and multi-domain near-peer threat environment and associated warfighting challenges to stimulate Joint and Navy training audiences, enabling the Fleet Commander to certify deploying forces in a synthetic Joint training environment and Joint Force Maritime Component Commands (JFMCCs) to participate in realistic Combatant Commander Exercises.

FY 2024 Plans:
Provide continued development of capability for integration with annual software release of the Navy Training Baseline (NTB) to enable tactics, techniques and procedures (TTP) development for contested environments and Ballistic Missile Defense (BMD).

Continue to develop advanced models to support Navy and Joint Operational Level of War (OLW) exercises and tactical training; to include Anti-ship Cruise Missile (ASCM) defense, Counter-ISR, including unmanned system (UxS) defense, theater and regional BMD, and AEGIS Weapons System, maritime air, tactical air and unmanned sensor and weapon system capability upgrades.

FY 2025 Plans:

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 772 *I Navy Joint National Training Capability (JNTC)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Provide continued development of capability for integration with annual software release of the Navy Training Baseline (NTB) to enable tactics, techniques and procedures (TTP) development for contested environments and Ballistic Missile Defense (BMD). Continue to develop advanced models to support Navy and Joint Operational Level of War (OLW) exercises and tactical training; to include Anti-ship Cruise Missile (ASCM) defense, Counter-ISR, including unmanned system (UxS) defense, theater and regional BMD, and AEGIS Weapons System, maritime air, tactical air and unmanned sensor and weapon system capability upgrades. *FY 2024 to FY 2025 Increase/Decrease Statement:* Minor changes to support the Secretary of Defense's Joint Training Infrastructure Goals.			
Accomplishments/Planned Programs Subtotals	1.678	3.165	3.165

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

D. Acquisition Strategy
 N/A

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 774 *I USMC Joint National Training Capability (JNTC)*

COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
774: *USMC Joint National Training Capability (JNTC)*	2.996	0.268	0.268	0.268	-	0.268	0.268	0.268	0.268	0.268	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 and JOTI Strategy Goal #1 and objectives, 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 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 2023**	**FY 2024**	**FY 2025**
Title: Marine Corps Joint National Training Capability (JNTC)	0.268	0.268	0.268
Description: Provides 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. 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. Addresses crucial integration of MAGTF Tactical Warfare Simulator (MTWS) into the Korean side of multi-resolution federation bridge supporting Ulchi Freedom Guardian covering training shortfalls in engineering obstacle simulations (minefields, chemical, anti-tank ditches, bridges, etc.).			
FY 2024 Plans: Continue to work on providing 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.			
FY 2025 Plans:			

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 774 *I USMC Joint National Training Capability (JNTC)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Continue to work on providing 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. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Continued support to the Secretary of Defense's Joint Training Infrastructure Goals.			
Accomplishments/Planned Programs Subtotals	0.268	0.268	0.268

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

D. Acquisition Strategy
 N/A

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Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 777 *I Large Scale Global Exercise (LSGE)*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
777: *Large Scale Global Exercise (LSGE)*	0.000	0.000	5.170	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

Large Scale Global Exercise (LSGE) funding provides a focused upgrade to develop products that mitigate gaps identified during CCMD exercises. Large Scale Global Exercises (LSGE) initiative facilitates LVC technical projects, architecture integration, and interface development required to enable Field Training Exercises (FTX) and Command Post Exercises (CPX) to achieve LGSE objectives. During LSGE execution, CCMD exercises as part of the JTEEP, tier 3 and 4 FTX exercises are frequently nested within the overall Tier 1 and 2 CPX exercises. The LSGE program enables tier 3 and tier 4 training, it is imperative the current service Tier 3 and Tier 4 Modeling & Simulation capabilities Joint Live Virtual Constructive Federates properly integrate with joint training LVC capabilities. Integrating LVC within FTX tactical exercise and CPX operational exercise requires new development efforts for LVC capabilities, LVC architectures, datasets, integration, and interfaces to create an LVC operational environment for training. This funding address refining LVC requirements, architecture design, new integrations, and capability and interface development to close joint operational training gaps critical to LSGE joint training. This targets the integration of the Military Service Title X LVC training to enable LGSE LVC joint training. This funding is essential to the success execution and integration efforts support CCMD joint training exercises.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Large Scale Global Exercise (LSGE)	0.000	5.170	0.000
Description: Large Scale Global Exercise funding provides a focused efforts to facilitate LVC technical projects, architecture integration, and interface development required to LSGE aligned Field Training Exercises (FTX) and Command Post Exercises (CPX) to mitigate joint operational training gaps. To enable tier 3 and tier 4 joint training in the future, it is imperative the current military service Tier 3 and Tier 4 M&S capabilities (Joint Live Virtual Constructive Federates) properly integrate with the Joint LVC capabilities. This funding will address refining LVC requirements, architecture design, new integrations, and capability and interface development to close joint operational training gaps critical to LSGE joint training. *FY 2024 Plans:* To enable tier 3 and tier 4 training in the future, it is imperative the current service Tier 3 and Tier 4 M&S capabilities (Joint Live Virtual Constructive Federates) properly integrate, and can utilize authoritative data and operational force structure to execute LSGE aligned FTX and CPX exercises. This funding will fund Service M&S developers, to ensure the services M&S outputs from JLVC properly integrate with the Joint capabilities and accelerate the development to produce automated OBS.XML schema from the remaining Service's (USMC, USAF, and USN) authoritative sources, operational force structure (ORION/GLS), and Threat (JACOB/JCOFA & MARS/MIDB).			

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 777 *I Large Scale Global Exercise (LSGE)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
Provide funding to Service/Agency technical teams to develop and integrate near term partner identified joint operational training gaps. Provide system engineering for NKE efforts aligned to LGSE exercise to include all-domain NKE from cyber, space, EMS, and IO. The focus is to refine requirements and leverage LSGE opportunities to accelerate an executable NKE training environment architecture capable of supporting advanced synthetic training. Provide Systems engineering for LSGE fully informed simulation environment and NKE training capabilities. Joint systems engineer will team JLVC engineers and Service/Agency teams to develop an executable synthetic environment architecture for fully informed simulation operations and NKE training capability integration. Joint systems engineering will leverage FY 2024 LSGE exercises to develop requirements and identify rapid technology insertion opportunities for: VALIANT SHIELD 24, VIGILANT SHIELD 24/ARCTIC EDGE 24/ARDENT SENTRY 24, APOLLO GRIFFIN 24, and CYBER FLAG 24. ***FY 2025 Plans:*** The funding line was closed out in FY 2025. FY 2025 future efforts are aligned under Joint Staff JLVC Modernization. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2024 was the last year to LGSE RDTE. The funding line was closed out in FY 2025 and all future LVC efforts are aligned under JTEEP Joint Staff JLVC Modernization.			
Accomplishments/Planned Programs Subtotals	0.000	5.170	0.000

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

D. Acquisition Strategy
 LSGE leverages existing GSA contract vehicles that enable world class contracting that allows for obligations, commitment and expenditures that align to JTEEP program goals.

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Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff | **Date:** March 2024

Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804768J / *Joint Training, Exercise and Evaluation Program (JTEEP)*	Project (Number/Name) 779 / *Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
779: *Joint Staff Live, Virtual and Constructive (JLVC) Modernization*	0.000	0.000	63.000	142.698	-	142.698	145.311	89.874	74.423	77.586	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

China has greatly increased the urgency for realism of joint training using JLVC to improve readiness and interoperability, and unearth operational weaknesses. Joint Live, Virtual and Constructive (JLVC) Modernization project seeks out, develops, and integrates training technologies to provide a reliable, realistic, relevant, repeatable, and recordable training environment to train joint warfighters to successfully execute operational plans (OPLANs). This funding will be used to integrate joint training LVC capabilities and environments by leveraging artificial intelligence (AI) and machine learning technologies to create a more realistic, effective, and affordable joint training environment. JLVC Modernization focus areas to develop a realistic operational environment for training is 1) standardize joint and Service level simulations, authoritative data, simulation models, and implementing cross-domain/multi-level security solutions, 2) modernizing simulations and incorporating space, cyber, realistic electromagnetic spectrum (EMS) and Information Operations (IO) environments to all aspects of JLVC, 3) increasing capacity, integrating, and building interoperability with Allies and partners, and 4) enabling the integration of experimentation and wargaming within training to better integrate force employment, force development and design LVC activities. This project is the only Department of Defense modernization effort that integrates joint and military service LVC training environment to create an integrated and interoperable all-domain joint training synthetic environment.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Joint Staff Live, Virtual and Constructive (JLVC) Modernization	-	63.000	142.698

Description: Joint Live, Virtual and Constructive (JLVC) Modernization project will develop and integrate joint training capabilities to enable all-domain collective training within Service and Combatant Command joint exercises. JLVC is the only joint LVC integrating architecture that creates a complex operating environment to enable tactical, operational, and strategic joint training. This modernization effort is a VCJCS and OSD priority and essential to close validated joint training gaps for the Joint Force to train against an increasing China threat.

The JLVC Modernization project includes the evaluation of innovative training technologies from Industry, academia and across the Services to ensure efficiency and incorporate technologies that supports the JLVC Modernization construct by focusing on standardizing simulations, data libraries and implementing cross domain solutions, incorporating space, cyber, and realistic electromagnetic spectrum (EMS), Information Operations (IO environments, and increasing capacity and integrating with Allies and partners ensuring the greatest value to the Department of Defense.

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 779 *I Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
JLVC Modernization is working directly with CCMDs and the Services to optimize existing training programs of records and training environments while developing Joint interoperability and data standards, AI-based training systems, and integrating next generation Joint LVC training capabilities to ensure inherent training interoperability across all warfighter domains. In addition, JLVC Modernization is leveraging non-traditional industry, academia, and small business consortiums to target, adapt, and accelerate advanced technologies and AI-based training capabilities for rapid technology integration and insertion into the Global Joint Training Enterprise to advance the high-end training environment to enable training and mission rehearsal in support of the Joint Warfighting Concept. *FY 2024 Plans:* JLVC Modernization established the project management structure, repeatable annual processes, LVC stakeholder community of interest, and refined requirements. Key accomplishments include: 1) JLVC Modernization joint operational training gap identification and prioritization; 2) alignment of FY 2024/2025 technology investment strategies with JWC 3.0 and operational training gap Joint LVC training requirements; 3) direct outreach through government/industry/academia consortiums to non-traditional Joint LVC industry, academia, and small business partners to address critical training challenges through rapid technology development and insertion; 4) coordination, synchronization and deconfliction with INDOPACOM's Pacific Multi-domain Training and Experimentation Capability (PMTEC) and Test and Evaluation community (TRMC) to ensure alignment of training requirements and technology testing and insertion requirements; 5) and coordination with CCMDs, the Services, and combat support agencies on addressing the application of non-kinetic/non-lethal effects within the Joint LVC training environment. FY 2024 $63M 'Shovel-ready' projects focused on foundational technology and enterprise requirements, fully informed simulation environment development, rapid integration of mature simulation technologies to support all domain requirements, implementation of enterprise-wide data standards, development of Joint LVC interoperability requirements, and development and integration of technologies that rapidly address prioritized Joint Operational Training Gaps (JOTG). Initial pathfinder experimental development with AI-based technologies to address rapid scenario generation and smart OPFOR challenges. Focused projects include: - JLVC Coalition Simulation Interoperability - Joint Innovation and Integration Lab (JIIL) - Defense Continuous Training Environment (DCTE) - Joint Training Enterprise Network Expeditionary (JTEN-X) node capability - JLVC Standardization for All-Domain Effects - Terrain Database Interoperability - JLVC High Level Architecture (HLA) Library Application Programming Interface (API) - Data Governance Framework - JLVC Modernization Technical Engineering Teams			

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 779 *I Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Cyber Effects for Joint Ground Model - Space Combat Simulator - JLVC Contested Logistics Simulation Capability - JLVC Mission Partner Environment (MPE) - Fully Informed Simulation Environment / Cross-Domain Solution (CDS) ***FY 2025 Plans:*** FY 2025 focuses on developing and integrating new JLVC all-domain capabilities aligned to FY 2025 Joint Operational Training Gaps (JOTGs). China has greatly increased the urgency to provide LVC-enabled advanced warfighter training to prepare a joint force for the changing character of war. The modernization of the entire JLVC synthetic training environment will better represent current and future friendly and enemy capabilities in all domains, and new JLVC capabilities must be developed and integrated that address the priority JOTGs needed to train against key operational problems and new joint warfighting concepts. The prioritized FY 2025 JOTGs that are being addressed in FY 2025 projects are: - Joint Common Synthetic Training Environment (JCSTE) - Mission Partner Environment (MPE) enhancement - Wargaming Design and Data Standardization - Electro-Magnetic Spectrum (EMS) enhancement - Enhanced Cyber effects integration - Operational Information Environment (IE) training - Contested Logistics - Space capabilities - BMD/IAMD enhancement - Enhanced CBRNE/CWMD training - Live range enhancement - "Gray Space" operations The FY 2025 projects are: - Fully informed simulation environment. Migration of JLVC toolsets to JWICS-TS/SCI training network, CDS development, cross simulation federation development, and wargaming toolsets at the TS/SCI level. - Advanced capability modeling (Non-kinetic effects). Multiple projects for CBRNE, cyber, space-based, and electromagnetic effects modeling which addresses all-domain integrated sensor-to shooter training. Enterprise NKE server capability to support effects across the training environment and ensure compatibility with legacy training systems. - Architecture design and integration of Defense Continuous Training Environment (DCTE) to provide a framework for the established of a common synthetic training environment.			

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 779 *I Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
- Exercise management tools. Integration of JLVC modernization with INDOPACOM's PMTEC Joint Simulation and Technology Command and Control (JSTC2) toolset FY 2025 Plans: FY 2025 focuses on developing and integrating new JLVC all-domain capabilities aligned to FY 2025 JOTGs. China has greatly increased the urgency to provide LVC-enabled advanced warfighter training to prepare a joint force for the changing character of war. The modernization of the entire JLVC synthetic training environment will better represent current and future friendly and enemy capabilities in all domains, and new JLVC capabilities must be developed and integrated that address the priority JOTGs needed to train against key operational problems and new joint warfighting concepts. The prioritized FY 2025 JOTGs that are being addressed in FY 2025 projects are: - Joint Common Synthetic Training Environment (JCSTE) - Mission Partner Environment (MPE) enhancement - Wargaming Design and Data Standardization - Electro-Magnetic Spectrum (EMS) enhancement - Enhanced Cyber effects integration - Operational Information Environment (IE) training - Contested Logistics - Space capabilities - BMD/IAMD enhancement - Enhanced CBRNE/CWMD training - Live range enhancement - "Gray Space" operations The FY 2025 projects are: - Fully informed simulation environment. Migration of JLVC toolsets to JWICS-TS/SCI training network, CDS development, cross simulation federation development, and wargaming toolsets at the TS/SCI level. - Advanced capability modeling (Non-kinetic effects). Multiple projects for CBRNE, cyber, space-based, and electromagnetic effects modeling which addresses all-domain integrated sensor-to shooter training. Enterprise NKE server capability to support effects across the training environment and ensure compatibility with legacy training systems. - Architecture design and integration of Defense Continuous Training Environment (DCTE) to provide a framework for the established of a common synthetic training environment. - Exercise management tools. Integration of JLVC modernization with INDOPACOM's PMTEC Joint Simulation and Technology Command and Control (JSTC2) toolset and initiative to provide interoperability with PMTEC training and experimentation architectures.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 The Joint Staff		Date: March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 779 *I Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Mission Partner Environment. Integration of LVC for CCMD MPE and STRATCOM/SPACECOM training model capability. - Data standardization/CJADC2 alignment. Investments in data standardization for Service models, integration of next generation USAF training simulation suite, USA electronic warfare (EW) operational environment integration, integration of USN's TS/SCI network and above Secret training capabilities, and USSF's space combat simulator. - Wargaming. Simulation-assisted wargaming capability capable of integrating disparate wargaming simulation systems with the JLVC enterprise to provide for a seamless wargame-JLVC training exercise-wargame campaign environment. - Advanced weapons. Hypersonic weapons development and integration for advanced kill webs. - Cross domain solutions. CDS architecture and rule set development to support TS/SCI to SECRET//REL training and MPE environments. - Cloud computing for LVC. JLVC TS/SCI data center, cloud optimization, and software containerization to support rapid, simulation architecture implementation at the fully informed level. - 5th Generation aviation simulators. JLVC and Joint Synthetic Environment integration tool to enable a complete training battlespace for CCMD Tier 1 training exercises. - Artificial Intelligence / Machine Learning (AI/ML). AI applied to advanced missile defense systems modeling, smart OPFOR capabilities, after action review (AAR) and assessment toolsets. FY 2025 JLVC Modernization projects begin to transition LVC synthetic environment to a data-centric modular open systems architecture that aligns to the DoD Modernization, Data, and Zero Trust strategies. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The planned increase in RDTE requirements from FY 2024 ($63M) to FY 2025 ($142.7M) is driven by the urgency to modernize quickly to provide realistic joint training for rapidly increasing China threat. The increase also represents the complexity and funding needs to accelerate technology to the timeline required for 2027 IOC requirements to conduct realistic joint global exercises. The efforts in FY 2024 will establish the project management structure, joint engineering, and foundational groundwork necessary to develop, integrate, and test all-domain simulation and fully informed simulation environment technologies, and JOTG gap closing capabilities to enable training to the high-end fight by FY 2027. FY 2024 efforts must now be significantly scaled to simultaneously develop advanced JLVC capabilities, test and validate, and integrate across the JLVC. This includes the joint engineering and integration necessary for JLVC modernization to provide the joint "purple glue" that integrate the Joint Synthetic Environment (5th Gen TACAIR), Joint IO Range and Persistent Cyber Training Environment (Cyber training), USSF Space Range, and All-Domain test ranges that create the entire joint training synthetic environment.			

Exhibit R-2A, **RDT&E Project Justification:** PB 2025 The Joint Staff		**Date:** March 2024
Appropriation/Budget Activity 0400 *I* 6	**R-1 Program Element (Number/Name)** PE 0804768J *I Joint Training, Exercise and Evaluation Program (JTEEP)*	**Project (Number/Name)** 779 *I Joint Staff Live, Virtual and Constructive (JLVC) Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2023**	**FY 2024**	**FY 2025**
FY 2025. $142.7M. Accelerate to develop and Modernize Capability to the rapidly increasing China threat. FY 2025 - 2028 represent the most critical years for investments, development, testing, and integrating capabilities to achieve an IOC in 2027. The simultaneous development to close validate joint operational training gaps is an imperative for conducting a realistic global training exercise that stresses key operational problems and exercise joint warfighting concepts, to assess joint operational readiness and weakness. Priority capability requirements for FY 2025 development and integration into the GJTI: − Fully Informed sim environment / cross domain solutions − Data standardization/CJADC2 alignment for service sim models − Joint Synthetic Environment / 5th Gen environment integration solution − SPACECOM space model solution − Cyber mission tools − Federation tactical communications and C2 model − Exercise management tools − Wargaming and Joint Experimentation simulation tools FY 2025 solutions will include capabilities developed by academia, small technology businesses, and non-traditional JLVC industry partners to exploit innovation and disruptive technology, ensure a wide base of solutions across the entire DoD technology base, and to maximize quick turn capabilities the accelerated the JLVC Modernization project timelines for a China threat.			
Accomplishments/Planned Programs Subtotals	-	63.000	142.698

C. Other Program Funding Summary ($ in Millions)

 N/A

Remarks

D. Acquisition Strategy

 The Combatant Commands, Services, Defense Agencies, and the Office of the Secretary of Defense nominate candidate projects aligned to Joint Operational Training Gaps (JOTGs) on an annual basis. JOTGs are validated and prioritized annually by the CCMDs and Services to align project investments with joint training enterprise priorities. JLVC Modernization has developed a deliberate acquisition strategy that leverages existing and competitive award contracts through the Joint Staff and the Services. The strategy integrates industry proven technology and expertise by using Service Agency agreements with the Army Combat Capabilities Development Command (DEVCOM) , Navy Systems Commands, DTIC IAC MAC, Other Transaction Authorities (OTA's) and partnering using Cooperative Research Development Agreements (CRADA's) The acquisition strategy address the technical, business and program reporting requirements to ensure accountability and transparency of the JLVC Modernization project through its intended lifecycle.

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