Department of Defense
Fiscal Year (FY) 2024 Budget Estimates

March 2023

Defense Logistics Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
FY 2024 President's Budget
Exhibit R-1 FY 2024 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Mar 2023

Appropriation	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment	FY 2024 Request
Research, Development, Test and Evaluation, Defense-Wide	350,904	352,072		352,072	245,474
Total Research, Development, Test, & Evaluation	**350,904**	**352,072**		**352,072**	**245,474**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of Defense
FY 2024 President's Budget
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Mar 2023

	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment	FY 2024 Request
Summary Recap of Budget Activities					
Advanced Technology Development	295,724	313,762		313,762	207,691
System Development & Demonstration	31,790	23,171		23,171	32,629
Management Support	11,500				
Operational Systems Development	11,890	15,139		15,139	5,154
Total Research, Development, Test, & Evaluation	**350,904**	**352,072**		**352,072**	**245,474**
Summary Recap of FYDP Programs					
Research and Development	339,014	336,933		336,933	240,320
Central Supply and Maintenance	11,890	15,139		15,139	5,154
Total Research, Development, Test, & Evaluation	**350,904**	**352,072**		**352,072**	**245,474**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Defense-Wide
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Defense-Wide
FY 2024 President's Budget
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(Dollars in Thousands)

Mar 2023

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

Line No	Program Element Number	Item	Act	Sec	FY 2022 Actuals	FY 2023 Less Supplementals Enactment	FY 2023 Supplementals Enactment*	FY 2023 Total Enactment
55	0603680S	Manufacturing Technology Program	03	U	80,924	92,766		92,766
56	0603712S	Generic Logistics R&D Technology Demonstrations	03	U	12,325	13,663		13,663
58	0603720S	Microelectronics Technology Development and Support	03	U	202,475	207,333		207,333
	Advanced Technology Development				**295,724**	**313,762**		**313,762**
139	0605070S	DOD Enterprise Systems Development and Demonstration	05	U	654			
140	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	U	31,136	23,171		23,171
	System Development & Demonstration				**31,790**	**23,171**		**23,171**
168	0605502S	Small Business Innovative Research	06	U	11,500			
	Management Support				**11,500**			
263	0708012S	Pacific Disaster Centers	07	U	5,733	11,875		11,875
264	0708047S	Defense Property Accountability System	07	U	6,157	3,264		3,264
	Operational Systems Development				**11,890**	**15,139**		**15,139**
Total Research, Development, Test and Evaluation, Defense-Wide					**350,904**	**352,072**		**352,072**

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56	0603712S	Generic Logistics R&D Technology Demonstrations	03	U	16,580
58	0603720S	Microelectronics Technology Development and Support	03	U	144,707
	Advanced Technology Development				**207,691**
139	0605070S	DOD Enterprise Systems Development and Demonstration	05	U	
140	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	U	32,629
	System Development & Demonstration				**32,629**
168	0605502S	Small Business Innovative Research	06	U	
	Management Support				
263	0708012S	Pacific Disaster Centers	07	U	1,905
264	0708047S	Defense Property Accountability System	07	U	3,249
	Operational Systems Development				**5,154**
Total Research, Development, Test and Evaluation, Defense-Wide					**245,474**

Defense Logistics Agency
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Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603680S *I Manufacturing Technology Program (ManTech)*							
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
Total Program Element	238.038	80.924	92.766	46.404	0.000	46.404	50.397	51.347	51.246	50.343	Continuing	Continuing
IBMP: *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*	125.769	25.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
AAA: *Maintaining Viable Supply Sources (formerly High Quality Sources)*	80.717	15.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
OOO: *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*	31.552	40.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
IBA: *Industrial Base & Aging Weapon System Support*	0.000	0.000	53.222	36.728	0.000	36.728	40.542	41.305	41.091	39.982	Continuing	Continuing
TDM: *3D Tech Data Modernization / Model Based Enterprise*	0.000	0.000	39.544	9.676	0.000	9.676	9.855	10.042	10.155	10.361	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) Manufacturing Technology (ManTech) Program funds the advanced technology development needed to achieve a responsive, efficient domestic industrial base that meets the warfighters' needs in an affordable and timely manner. The ManTech program works with DLA's diverse supply chains to improve manufacturing capability throughout a product's life cycle. It provides the crucial link between invention and application by maturing, scaling up, and validating advanced manufacturing technology in "real world" environments. ManTech developments provide a path to low-risk technology implementation for many small businesses and defense unique suppliers as well as depots and shipyards that are critical to DLA. By anticipating and addressing production and sustainment problems before they occur, readiness levels increase and sustainment costs are decreased.

Beginning in FY 2023, DLA ManTech shifts from three Strategic Focus Areas (SFAs) to two Lines of Effort (LOEs): 1) Industrial Base and Aging Weapon System Support (R&D LOE 1) and 2) 3D Technical Data Modernization / Model-Based Enterprise (R&D LOE 2). These LOEs are closely aligned to documented and tracked priorities specified in the most current DLA Strategic Plan, that calls for Digital Business Transformation as one of three critical capabilities to achieve DLA's business goals of enhancing performance, reducing costs, and becoming more predictive and data-driven. This critical capability also seeks to transform systems and processes to improve data transparency, reliability, and security for our employees, customers, and suppliers. DLA's initiatives within this critical capability align with the interim National Security Strategy (NSS) by emphasizing the importance of harnessing rapid emerging technologies that will transform how we do business.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603680S *I Manufacturing Technology Program (ManTech)*

-In addition to alignment to DLA's top strategic priorities, under Section 2521 of Title 10, US Code, DLA ManTech efforts are collaborated across DOD Military Services and Agencies. As a Principal member of the Joint Defense Manufacturing Technology Panel, DLA's efforts are integrated within the Joint Defense Priorities.

-The Industrial Base and Aging Weapon System Support LOE (R&D LOE 1) seeks to implement innovative and proactive technology solutions to ensure a robust, reliable industrial base that provides affordable and previously hard-to-procure critical parts for DOD weapon systems. This LOE aligns to DLA Strategic Plan LOE 1: Warfighter Always, DLA LOE 2: Trusted Mission Partner, DLA LOE 4: Modernized Acquisition and Supply Chain Management, as well as the cross-cutting Critical Capability C: Digital Business Transformation through the following portfolios: DOD Subsistence Supply Chain (Subsistence Network), Castings (Procurement Readiness Optimization—Advanced Casting Technology), Forgings (Procurement Readiness Optimization—Forging Advanced System Technology), Batteries (Battery Network), Additive Manufacturing (AM), and Advanced Microcircuit Emulation (AME).

-The 3D Technical Data Modernization / Model Based Enterprise LOE (R&D LOE 2) integrates three-dimensional technical data and knowledge-based tools to transform and streamline supply system responsiveness for DLA-managed commodities. Efforts seek to improve and facilitate the exchange of engineering and logistics information among DLA, the Military Services, DLA industry partners and DLA customers. The benefits include shorter product introduction cycles, lower set up-costs for parts production and more economical small batch production. Primarily focused on the DLA Strategic Plan Critical Capability C: Digital Business Transformation, this R&D LOE cuts across DLA Strategic Plan LOE 1: Warfighter Always, DLA LOE2: Trusted Mission Partner, and DLA LOE 4: Modernized Acquisition and Supply Chain Management through portfolios for DOD soldier and individual equipment (Military Unique Sustainment Technology ((MUST)) and Defense Logistics Information Research (DLIR), as well as out of budget cycle or Emerging Manufacturing Technology (EMT) requirements.

-Until the shift from SFAs to LOEs in FY 2023, DLA ManTech remains aligned into three Strategic Focus Areas (SFAs) for FY 2021 and FY 2022: 1) Improving Industrial Base Manufacturing Processes (IIBM); 2) Maintaining Viable Sources of Supply (MVSS); and 3) Improving Technical and Logistics Information (ITLI).

-The IIBM SFA includes efforts to reduce industrial base material costs and production lead-times, while improving the quality of DLA managed products. This SFA has supply chain focused execution portfolios for food (Subsistence Network), Castings (Procurement Readiness Optimization—Advanced Casting Technology), Forgings (Procurement Readiness Optimization—Forging Advance System Technology), Batteries (Battery Network) and Additive Manufacturing.

-The MVSS SFA includes efforts to assure the commercial industrial base can satisfy DLA materiel requirements without relying on foreign sources for microcircuits. This strategic focus area mitigates supply issues caused by the lack of a reliable domestic manufacturing capability to produce products or raw materials needed to build and maintain weapon systems. The major focus of the program is maintaining a reliable, trusted, domestic source for "non-procurable" linear and digital microcircuits. Microcircuit emulation allows the Services to save significant costs by using form, fit and functionally equivalent spare parts rather than redesigning the next-higher-assembly.

-The ITLI SFA includes efforts to improve and facilitate the exchange of engineering and logistics information among DLA, the Military Services, DLA industry partners and DLA customers. It includes the Military Unique Sustainment Technology (MUST) and the Defense Logistics Information Research (DLIR) programs. A primary focus of this SFA is to capitalize on the emerging "Model Based Enterprise" paradigm and the semantic web as an enabler to a logistics system that is smart and connected up and down the supply chain and across all DLA Customers and suppliers. A major focus is to transform DOD engineering data from two-dimensional paper-based

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603680S *I Manufacturing Technology Program (ManTech)*

products to three-dimensional computer based models, and to develop processes to move from “electronic paper” (i.e. PDF files) to technical data files that can interface directly with industries’ engineering systems. The benefits include shorter product introduction cycles, lower set up-costs for parts production and more economical small batch production.

DLA’s focus for this budget cycle highlights advanced capabilities in digital and technical data modernization, data management and analytics to fulfill the DLA role in the DOD Digital Engineering Strategy and improve sharing of data with the industrial base and supported organizations. Investment explores technologies to lower the Agency’s material acquisition and operation costs and improve weapons systems support. This effort spans across both DLA R&D Program Elements and R&D LOEs, impacting across the DOD Joint Defense Manufacturing Technology Panel and DLA Enterprise logistics processes.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	38.268	46.166	45.157	-	45.157
Current President's Budget	80.924	92.766	46.404	-	46.404
Total Adjustments	42.656	46.600	1.247	-	1.247
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	46.000	46.600			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.338	-			
• SBIR/STTR Transfer	-3.006	-			
• Internal Reallocation	-	-	1.000	-	1.000
• Labor Inflation	-	-	0.025	-	0.025
• Non-labor Inflation	-	-	0.222	-	0.222

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: IBMP: *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*		
Congressional Add: *Steel Performance Initiative in Castings*	10.000	-
Congressional Add: *PFAS Compounds In Food Packaging Materials Research*	3.000	-
Congressional Add Subtotals for Project: IBMP	13.000	-
Project: OOO: *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*		
Congressional Add: *Supply Chain for Readiness and Sustainment*	8.000	-
Congressional Add: *Rare Earth Recovery Technology*	2.000	-
Congressional Add: *Conversion Of Titanium Scrap*	5.000	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603680S *I Manufacturing Technology Program (ManTech)*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Congressional Add: *Graphite Materials*	9.000	-
Congressional Add: *Nanostructured Iron Nitride Permanent Magnets*	7.000	-
Congressional Add: *Modeling & Simulation Competition*	2.000	-
Congressional Add Subtotals for Project: OOO	33.000	-
Project: IBA: *Industrial Base & Aging Weapon System Support*		
Congressional Add: *Flake graphite-based solutions for PFAS contamination*	-	5.000
Congressional Add: *Steel Performance Initiative*	-	13.000
Congressional Add Subtotals for Project: IBA	-	18.000
Project: TDM: *3D Tech Data Modernization / Model Based Enterprise*		
Congressional Add: *AI based market research system*	-	3.000
Congressional Add: *Supply Chain Readiness Improvement Program*	-	5.000
Congressional Add: *Battery Grade Graphite*	-	3.600
Congressional Add: *High performance magnets*	-	5.000
Congressional Add: *Hypersonic radomes and apertures*	-	5.000
Congressional Add: *Nanostructured iron nitride permanent magnets*	-	7.000
Congressional Add Subtotals for Project: TDM	-	28.600
Congressional Add Totals for all Projects	46.000	46.600

Change Summary Explanation

Internal Reallocation FY 2024: Three-dimensional (3D) Technical Data Modernization / Model-Based Enterprise (TDM) baseline was increased by $0.357 million for Critical Chemical, Strategic Material Related Efforts. Industrial Base and Aging Weapon System Support (IBA) baseline was increased by $1.000 million based on an internal funding reallocation decision to address sustainment gaps and bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for solider and system batteries.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBMP / *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
IBMP: *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*	125.769	25.654	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Improving Industrial Base Manufacturing Processes Strategic Focus Area (SFA) is an R&D effort undertaken with DLA's suppliers to reduce material costs, reduce the length and variability of production lead-times, assure DLA managed products meet performance requirements, and continuously improve quality and reliability. Benefits of this SFA include lower material costs, lower inventory levels and more predictable customer wait times, fewer quality deficiencies, and lower customer support costs. This SFA includes within its scope the Subsistence Network, the Battery Network, the Castings/Forging programs and Additive Manufacturing programs.

*In FY 2023, this SFA, Improving Industrial Base Manufacturing Processes (IBMP), closes out. All programs described below shift to the Industrial Base & Aging Weapon System Support (IBA) Line of Effort (see R-2A).

The Subsistence Network (SUBNET) program focuses on solutions to develop and promote manufacturing improvements in the subsistence supply chain. The program's expanded areas of interest include combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense developments, garrison feeding, nutrition and health, storage and packing solutions, surge and sustainment support, and water security. SUBNET forms a community of practice with Military Services, U.S. Department of Agriculture, Natick Soldier Research Development, and Engineering Center; Academia, and Industry to research and promote manufacturing improvements in the Subsistence Supply Chain. The SUBNET goals are to utilize innovation and the leverage the latest technologies to maximize the logistics capability and capacity within the subsistence supply chain industrial base. The desired outcomes include reduced cost, increased efficiencies, improved processes, enhanced quality, and improved surge demand capabilities.

The Casting program works to ensure a stable, reliable, and competitive domestic casting industrial base supporting the weapon system needs of the Department of Defense (DOD) and the Defense Logistics Agency (DLA). The casting program works with industry, universities, and the Casting Industry Associations to identify projects that improve the materials, processes and business practices of the nation's foundry industry. The program aligns projects with strategic issues and identified focus areas within the DLA and DOD. Guidance for these projects comes from the DLA Strategic Plan and input from the casting industry. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Cast parts are about two percent of National Stock Numbered Class IX parts but represent about five percent of all backorders, and when only the oldest backorders are considered, up to 10 percent are castings. This program includes tasks that focus on developing new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed, these capabilities will support the foundry industry, where the technologies will be tested and implemented, most often in conjunction with the casting industry associations. These advancements improve the metal casting supply chains for the DOD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBMP / *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*

The Forging program works to ensure a stable, reliable, and competitive domestic forging industrial base for the weapon system needs of the Department of Defense (DOD) and the Defense Logistics Agency (DLA). Working with industry, universities, and the Forging Industry Association to identify projects that improve the materials, processes and business practices of the nation's forging industry. The program aligns its projects with strategic issues and focus areas identified within the DLA and DOD. Guidance for these projects comes from the DLA Strategic Plan and input from the forging industry. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are about two percent of National Stock Number (NSN) Class IX parts but represent about five percent of all backorders, and when only the oldest backorders are considered, up to 10 percent are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where these technologies will be tested and implemented in conjunction with the forging industry associations. These advancements improve the forging supply chains for the DOD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems.

The Battery Network (BATTNET) program objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life, and lighter batteries with higher energy. BATTNET conducts R&D initiatives to address sustainment gaps and bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for specific groups of batteries. BATTNET also focuses on projects to develop the production capability for advanced lithium-based non-rechargeable and rechargeable batteries to ensure the prompt and sustained availability, quality, and affordability of Service approved batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolved obsolescence issues; addressed surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and leveraged Service-level (Army, Navy, Air Force) and other governmental (DOE, DOT, NASA) R&D efforts to insert new technology and practices into the existing DLA battery inventory.

The Additive Manufacturing (AM) program objective is to streamline customer purchase requests for AM items and provide the Warfighter an alternate source of supply for designated requirements. This effort responds to DLA's role called out in DOD Instruction 5000.93, Use of AM in DOD to integrate AM into the supply chain, by leading the development of effective AM procurement processes. The AM effort explores innovative technologies as it pursues this alternate means of supply for products that are otherwise non-procurable or susceptible to procurement issues. The AM effort includes collaborative efforts with the Military Services to develop analytical tools to identify viable AM candidates while considering logistics planning factors. The AM effort requires effective management of the digital thread composed of authoritative 3D digital technical, manufacturing and testing data exchanged among designers, engineers, maintainers, logisticians, procurement managers and the vendor base to enable quality assurance acceptability. Potential AM benefits include products that can address an unfulfilled Warfighter readiness need by reducing production lead times, production costs, storage costs, transportation costs and in some cases fuel consumption due to lighter design and material options. DLA R&D will leverage these efforts with Industry, Academia and ongoing Military Service-level agreements (Army, Navy, Marine Corps, Air Force), Oak Ridge National Laboratory (ORNL) and the Department of Energy.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	12.654	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBMP / *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Description: The Subsistence Network (SUBNET) program continued to research and execute short-term innovative projects to improve the subsistence supply chain in FY 2022. The SUBNET program incorporated emerging technologies to address stakeholder's requirements as well as leveraged supply chain innovations, best practices, and industry trends. The SUBNET program continues its pilot test in the areas of modernization and readiness analysis of joint food management system and improving subsistence visibility through enhancing receipting and barcoding at an OCONUS location. The SUBNET also successfully conducted research in FY 2022 regarding radio frequency sterilization processing of unitized group rations for two products, determining failure mechanisms of polymeric packaging materials to identify replacement laminate structures, and assessed the current unified combatant command and overseas subsistence functions by examining current operational and technological capabilities. The program also pursued small business innovation phase II research topics in subsistence to include robotic automation in military dining facilities, developing and promoting solutions for a kitting and assembly platform system that could be deployed in a short period of time, and develop innovative solutions to address moldy pallets in storage areas. SUBNET works with community partners (government, military services, academia, and industry) to conduct research and test and evaluate initiatives in the subsistence supply chain. The Casting program monitored awarded projects that were aimed to research, develop and deploy innovative and technical solutions to ensure a viable and competitive domestic industrial base. The Casting program continued its work with Academia, industry, and industry associations to continually identify future development and technical needs in alignment with the DoD and DLA to include appropriate strategic plans and roadmaps. These projects continue beyond FY2022 in areas of modeling and simulation, die coatings and lubrication, virtual reality, automation and sensor technologies. All projects working to ensure a viable supply chain in support of the warfighter. The Forging program continued to monitor awarded projects focused on exploring alternative forging manufacturing methods, materials to reduce production lead-time and costs, modeling and simulation software improvements and enhancements and improvements to post processing methods. We continued to see positive results from these projects, Ceramic Coatings for Forging Furnaces reported over a 40% reduction in Natural Gas usage and more than 60% reduction in recovery time for a forging furnace which was coated as part of this project. A few projects successfully finished and continue working on implementing the new technologies, such as the Direct from the Forge Intensive Quench project as it continues its transition to the forging industry. The Battery Network (BATTNET) program The Battery Network (BATTNET) program continued projects for improving the production readiness and technology transition for soldier and system batteries within the DLA supply chain. The program improved the capacity and capabilities of lithium anode production for current non-rechargeable and future rechargeable batteries at a major supplier. The program enabled UV curable polymer processes for rapid cathode production. The program prototyped			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
and tested several versions of Bipolar lead-acid technology in major system formats to reduce battery cost and weight, improve battery energy and power, and extend battery shelf life and operational life. The program completed preliminary designs and safety tests with lithium titanate cells for potential replacements to nickel-cadmium batteries. The program continued managing Congressional Add projects for transitioning high value solid-state electrolyte products into key soldier lithium-ion batteries. The program continued to initiate and manage several SBIR projects in advanced lithium-ion battery manufacturing, recycling, and rapid materials synthesis. The Additive Manufacturing (AM) program, using market research, requests for information/proposals, Broad Agency Announcements (BAA), DLA R&D funded analysis of alternatives for the best cognitive computing solutions to integrate information from several logistics, engineering, legal, and supplier data sources into an efficient AM decisional framework. This analytics effort transitioned to the Military Services and will help uncover critical data in the decision processes for selecting AM as a viable option. The DLA AM R&D program also financed collaborative technical efforts from the military departments to enhance the AM product data management workflows that will enable AM acceptability and improve the overall responsiveness of an AM distributive manufacturing ecosystem. Another avenue to explore ways to accelerate AM acceptability included a pilot test on remote inspection capabilities, which rendered great insights into technologies that can greatly reduce administrative lead time in the testing environment. The reduction of R&D AM funding of approximately $0.943 million, resulting from an overall MANTECH $3.020 million directed reductions, impacted the DLA's continued efforts to identify the best technological applications to achieve precise robustness-repeatability-reproducibility of part fabrication using an AM technical data package in a distributed manufacturing setting.			
Accomplishments/Planned Programs Subtotals	12.654	-	-

	FY 2022	FY 2023
Congressional Add: Steel Performance Initiative in Castings ***FY 2022 Accomplishments:*** Awarded for new efforts under existing Steel Performance Initiative contract. Continued monitoring projects that began under the FY2021 Steel Performance Initiative that includes numerous projects within the following areas of focus: Steel Alloy Development and Manufacturing Technology; Integrated Process and Performance Modeling; Advanced Testing & Qualification; Improved Steel Casting Tooling; and Optimized Processing of Steel Materials.	10.000	-
Congressional Add: PFAS Compounds In Food Packaging Materials Research ***FY 2022 Accomplishments:*** Awarded new contract under the the Subsistence Network Broad Agency Announcement (BAA-0004-21) for pre and polyfluoroalkyl substances (PFAS) projects in partnership with U.S.	3.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBMP / *Improving Industrial Base Manufacturing Processes (formerly Material Availability)*

	FY 2022	FY 2023
Army Corps of Engineers Research and Development Center (ERDC) and Oregon State University (OSU) who lead the (PFAS research to determine where PFAS is originating in the MRE assembly process through the analysis of the raw material (e.g., film) used for MRE pouches and throughout the assembly line.		
Congressional Adds Subtotals	13.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / *Manufacturing Technology Program (ManTech)*	Project (Number/Name) AAA / *Maintaining Viable Supply Sources (formerly High Quality Sources)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
AAA: *Maintaining Viable Supply Sources (formerly High Quality Sources)*	80.717	15.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Maintaining Viable Supply Sources (MVSS) Strategic Focus Area (SFA) consists of projects undertaken to assure that the industrial base can respond to DLA requirements and DLA can fill military customers' material requirements reliably and consistently. Benefits include eliminating cancelled requisitions returned to customers as "non-procurable." This strategic focus area includes within its scope the Advanced Microcircuit Emulation (AME) program with the objective to maintain a reliable and trusted domestic source for "non-procurable" linear and digital microcircuits. Microcircuit emulation allows the Services to save significant costs by using form, fit and functionally equivalent spare parts rather than redesigning the next-higher-assembly. Without the technologies planned on the AME Roadmap, DLA will not be able to support DoD's requirements for high quality spare parts for critical electronic systems and subsystems, resulting in decreased warfighter readiness and significant cost for weapons system or component redesign.

*In FY 2023, this SFA, Maintaining Viable Supply Sources (AAA), closes out. The Advanced Microcircuit Emulation (AME) program shifts to the Industrial Base & Aging Weapon System Support (IBA) Line of Effort (see R-2A).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Maintaining Viable Supply Sources (formerly High Quality Sources)	15.199	-	-
Description: AME completed and transitioned the 20 Volt Operational Amplifier (Linear) Project in the first quarter. Dual-Port Memory (DPRAM) microcircuits Phase II is scheduled for qualification in the fourth quarter. AME continued development of 40 Volt Operational Amplifier project with anticipated completion for transition in third quarter of FY 2023. AME began Phase III project for development of Additive Manufacturing techniques to address Microcircuit Cases. AME began additional Linear/Analog emulation projects to include Small Case 20 Volt Operational Amplifier, Radiation-Hardened Linear microcircuits, and Dual-Voltage Process Development projects; anticipated durations to last through FY 2024. Also, AME initiated a project in the second quarter to acquire and implement advanced Ion Implantation equipment that expands increases microcircuit emulation capability.			
Accomplishments/Planned Programs Subtotals	15.199	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** AAA / *Maintaining Viable Supply Sources (formerly High Quality Sources)*

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** OOO / *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
OOO: *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*	31.552	40.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Improving Technical and Logistics Information (ITLI) SFA projects improve and facilitate the communication of technical and logistics information among industry, DLA's military customers and DLA. This SFA includes the Military Unique Sustainment Technology (MUST), the Defense Logistics Information Research (DLIR), and the Emergent Manufacturing Technology (EMT) portfolios within its scope.

*In FY 2023, this SFA, Improving Technical and Logistics Information(OOO), closes out. All programs shift to the 3D Tech Data Modernization / Model Based Enterprise (TDM) Line of Effort (see R-2A).

The Military Unique Sustainment Technology (MUST) program addresses GAO Report 12-707 recommendations for DoD to establish a "knowledge-based approach" to define, communicate, and collaborate on military unique Combat Uniforms and Individual Equipment (CUIE) requirements. DLA has the responsibility to manage and maintain the technical requirements among the Services and the Defense Industrial Base. Currently there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop, and adopt technologies that can significantly improve the joint process from transitioning new item development to DLA sustainment and operations. The Program focuses on technologies that will transform the military CUIE supply chain from an "electronic paper" (i.e. PDF/MS Word) based manual environment, into a knowledge-based model driven environment. This approach will result in seamlessly communicating military unique technical requirements throughout the end-to-end supply chain, leading toward a Model Based Enterprise.

The Defense Logistics Information Research (DLIR) program researches core technologies to improve the quality, security, and interoperability of logistics data acquisition and management to enable and streamline DLA operations. DLA enables transformation of business practices and methodologies as the data for weapons systems evolve from traditional formats and delivery methods (such as two-dimensional images and PDF formats) to newer, more innovative methods (such as three-dimensional solid models, object-oriented databases, service-oriented architecture (SOA) and Web 3C standards). This transformational shift for DLA is driven by the Model-Based Enterprise (MBE) approach, the way industry is delivering design and development data for weapon systems to the Military Services and the way the Military Services in turn manage and provide the data to DLA. DLA Logistics Operations, DLA Acquisition, DLA Tech/Quality, and DLA's Major Subordinate Commands (MSCs) are key stakeholders in the DLIR initiatives to modernize the representation and delivery of weapons systems data.

The EMT program addresses emerging and out of cycle requirements that always occur as DLA strives to maintain the readiness of the aging weapon systems.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** OOO / *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration	7.071	-	-
Description: Military Unique Sustainment Technology (MUST) delivered two working prototypes and accompanying functional requirement document to transition from R&D: Supply Request Package Tool and Source Sampling Test Reporting Tool. The SRP Tool has been successfully transitioned and adopted by all the Military Services and other DLA customers for new item introduction to DLA sustainment. The Source Sampling Tool (SST) captures the test results from the independent commercial laboratories used by Troop Support Clothing and Textile prime contractors. The SST is ready for vendor roll out. In addition, an initial prototype of the Digital Model library (DML) was developed. The DML will be the repository for CUIE digital technical data models and related industry standard models. The Defense Logistics Information Research (DLIR) program completed the Connecting the Model-Based Enterprise (MBE) project to modernize the process to obtain current Technical Data Packages (TDPs) directly from the Product Lifecycle Management (PLM) systems of the Military Services' ESAs and PMOs. DLIR also developed standard guidance for Military Service organizations, including the ESAs and PMOs, to guide and influence generation of 3D, model based TDPs that will support DLA and its supplier needs. DLIR explored the ability of commercial Digital Rights Management (DRM) tools and techniques to improve the security of TDPs and support the eventual development of functional requirements for the "Catalog of the Future" (COTF) by identifying and prototyping new cleansing tools and methods while simultaneously cleansing data. DLIR continued to support DLA's Technical Data Management Transformation (TDMT) efforts to determine the future state IT architecture design and began efforts in building the digital thread partnering with the Air Force KC135 and the Army's Paladin Artillery Systems. The Emerging Manufacturing Technology (EMT) program invested in Advanced Manufacturing solutions for DLA's support to DOD and Federal Government contingency operations, such as PPE and decontamination products and materials for COVID-19 response. In addition, EMT provided funding Critical to the transition and commercialization of successful Small Business Innovation Research (SBIR) projects such as emerging magnetic braking technologies, addressing strategic materials shortage/ risk, and advancements in Digital Manufacturing.			
Accomplishments/Planned Programs Subtotals	7.071	-	-

	FY 2022	FY 2023
Congressional Add: Supply Chain for Readiness and Sustainment	8.000	-
FY 2022 Accomplishments: Began work on a project that will significantly increase the number of small- to midsize employers (SMEs) that are ready to efficiently and effectively increase the defense manufacturing		

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** OOO / *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*

	FY 2022	FY 2023
supply chain through the adoption of additive manufacturing, automation, and robotics metal-casting (Industry 4.0) technologies.		
Congressional Add: Rare Earth Recovery Technology ***FY 2022 Accomplishments:*** Began coordination for a 24-month project to demonstrate a process of recovering Rare Earth Elements (REEs) from electronic waste (ewaste) materials from various commercially available sources, including DOD e-waste. Successful completion of this project would assist DOD in achieving its long-term goal of reducing foreign reliance on REEs.	2.000	-
Congressional Add: Conversion Of Titanium Scrap ***FY 2022 Accomplishments:*** Began coordination for a 36-month SBIR Phase III project to demonstrate the concept of converting titanium scrap to premium powder products for 3D printing and powder metallurgy. Titanium is a strategic material and critical for DOD applications.	5.000	-
Congressional Add: Graphite Materials ***FY 2022 Accomplishments:*** Began coordination for 36-month project to support domestic production of synthetic graphite precursor material for batteries and other military applications. This would help in supporting US graphite industry and securing DOD supply chain for various weapon systems.	9.000	-
Congressional Add: Nanostructured Iron Nitride Permanent Magnets ***FY 2022 Accomplishments:*** Began coordination for 36-month project to advance the technology and manufacturing readiness of non-rare-earth containing iron nitride permanent magnets for use in military electric components and systems.	7.000	-
Congressional Add: Modeling & Simulation Competition ***FY 2022 Accomplishments:*** Solicited work through R&D emergent BAA to include Digital Twin of Organizations (DTO); received and reviewed white paper proposals to award contract in the fourth quarter to build Digital Twin of Organization (DTO) that simulates DLA's business processes.	2.000	-
Congressional Adds Subtotals	33.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** OOO / *Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)*

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / *Manufacturing Technology Program (ManTech)*	Project (Number/Name) IBA / *Industrial Base & Aging Weapon System Support*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
IBA: *Industrial Base & Aging Weapon System Support*	0.000	0.000	53.222	36.728	0.000	36.728	40.542	41.305	41.091	39.982	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Industrial Base (IB) and Aging Weapon System Support Line of Effort (LOE 1) seeks to implement innovative and proactive technology solutions to ensure a robust, reliable industrial base that provides affordable and previously hard-to-procure critical parts for DOD weapon systems through the following objectives:

1. Viable and Responsive Industrial Base: maximize Defense Industrial Base capability and capacity and improve availability, quality, and affordability to support the Warfighter.
2. Obsolescence Solutions: establish a trusted manufacturing capability for qualified microcircuits to support DOD weapon system lifecycles.
3. Advanced Manufacturing: leverage advanced manufacturing capabilities to introduce and integrate additive and advanced manufacturing concepts into the DOD supply chain.

The portfolios within the IB and Aging Weapons System Support LOE include food-service supply chain solutions (Subsistence Network), Castings (Procurement Readiness Optimization—Advanced Casting Technology), Forgings (Procurement Readiness Optimization—Forging Advanced System Technology), Batteries (Battery Network), Additive Manufacturing (AM), and Advanced Microcircuit Emulation (AME).

The Subsistence Network (SUBNET) program focuses on solutions to develop and promote manufacturing improvements in the subsistence supply chain. The program's expanded areas of interest include combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense developments, garrison feeding, nutrition and health, storage and packing solutions, surge and sustainment support, and water security. SUBNET forms a community of practice with Military Services, U.S. Department of Agriculture, Natick Soldier Research Development, and Engineering Center; Academia, and Industry to research and promote manufacturing improvements in the Subsistence Supply Chain. The SUBNET goals are to utilize innovation and the leverage the latest technologies to maximize the logistics capability and capacity within the subsistence supply chain industrial base. The desired outcomes include reduced cost, increased efficiencies, improved processes, enhanced quality, and improved surge demand capabilities.

The Casting program works to ensure a stable, reliable, and competitive domestic casting industrial base supporting the weapon system needs of the Department of Defense (DOD) and the Defense Logistics Agency (DLA). The casting program works with industry, universities, and the Casting Industry Associations to identify projects that improve the materials, processes and business practices of the nation’s foundry industry. The program aligns projects with strategic issues and identified focus areas within the DLA and DOD. Guidance for these projects comes from the DLA Strategic Plan and input from the casting industry. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA’s backorders or unfilled orders (UFOs). Cast parts are about two percent of National Stock Numbered Class IX parts but represent about five percent of all backorders, and when only the oldest backorders are considered, up to 10 percent are castings. This program includes tasks that focus on developing new capabilities in the areas of inspection, materials, processes, modeling, and design. Once

developed, these capabilities will support the foundry industry, where the technologies will be tested and implemented, most often in conjunction with the casting industry associations. These advancements improve the metal casting supply chains for the DOD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.

The Forging program works to ensure a stable, reliable, and competitive domestic forging industrial base for the weapon system needs of the Department of Defense (DOD) and the Defense Logistics Agency (DLA). Working with industry, universities, and the Forging Industry Association to identify projects that improve the materials, processes and business practices of the nation's forging industry. The program aligns its projects with strategic issues and focus areas identified within the DLA and DOD. Guidance for these projects comes from the DLA Strategic Plan and input from the forging industry. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are about two percent of National Stock Number (NSN) Class IX parts but represent about five percent of all backorders, and when only the oldest backorders are considered, up to 10 percent are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where these technologies will be tested and implemented in conjunction with the forging industry associations. These advancements improve the forging supply chains for the DOD and the DLA to better support the warfighter. We will invest in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBA / *Industrial Base & Aging Weapon System Support*

Advanced Microcircuit Emulation (AME) program objective is to maintain a reliable and trusted domestic source for “non-procurable” linear and digital microcircuits. Microcircuit emulation allows the Services to save significant costs by using form, fit and functionally equivalent spare parts rather than redesigning the next-higher-assembly. Without the technologies planned on the AME Roadmap, DLA will not be able to support DoD’s requirements for high quality spare parts for critical electronic systems and subsystems, resulting in decreased warfighter readiness and significant cost for weapons system or component redesign.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Industrial Base (IB) and Aging Weapon System Support Line of Effort (R&D LOE 1)	-	35.222	36.728

Description: Funding and efforts for the Industrial Base & Aging Weapon System Support (IBA) Line of Effort (R&D LOE 1) begins in FY 2023. FY 2022 efforts related to this LOE are outlined in the R-2A for Improving Industrial Base Manufacturing Processes (IBMP) SFA and the R-2A for Maintaining Viable Supply Sources (AAA) SFA.

FY 2023 Plans:
The Subsistence Network (SUBNET) program will continue to develop and promote manufacturing improvements with R&D projects that leverage emerging technologies and innovations. The SUBNET program will work to improve as well as incorporate best practices and industry trends discovered through research that are crucial to the subsistence supply chain. SUBNET plans to research and execute projects in FY 2023 in the areas of modernization and readiness analysis for joint food management phase V business case analysis, the Congressional funded pre and polyfluoroalkyl substances in packing material used to assemble MREs research, investigation of performance metrics for meals, ready-to-eat (MRE) packaging with sustainable packaging options and conducting a Quality Study through microbiological testing with a MRE Assembler. The program will also continue to pursue Small Business Innovation Research (SBIR) topics in Subsistence.

The Casting program will work to maintain its alignment with the DLA Strategic plan and U.S. Casting Industry Roadmap. These provide guidance as to where the focus of development should be. The casting program will continue to focus on key areas of need which include workforce development to help sustain a stable supply chain for DLA, modeling and simulation tools, die lubricants and coatings to increase quality and decrease environmental impacts and automation and robotics to reduce lead time and increase safety. The Casting program continues to monitor projects that were awarded in FY 2022 that research, develop and deploy innovative and technical solutions to ensure a viable and competitive domestic industrial base. The Casting program works with Academia, industry, and industry associations to continually identify future development and technical needs in alignment with the DoD and DLA.

The Forging program continues to monitor projects that research, develop and deploy innovative and technical solutions to ensure a viable and competitive domestic industrial base. These projects focus on improving manufacturing processes and alternative forging manufacturing methods, materials to reduce production lead-time and enhancements and improvements to pre and post processing methods. These projects align with the needs of the DoD and DLA aimed and supporting and fulfilling the needs of the warfighter.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBA / *Industrial Base & Aging Weapon System Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
The Battery Network (BATTNET) program objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life and operational life, and safer, lighter batteries with higher energy. These battery performance improvements also create Operational Energy benefits and reduce logistics and maintenance requirements. BATTNET conducts R&D initiatives to address sustainment and source obsolescence gaps and to bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for specific groups of batteries. BATTNET also focuses on projects to develop the production capability for advanced lithium-based batteries to ensure the prompt and sustained availability, quality, and affordability of Service approved batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolving obsolescence, surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and assisting overall Department of Defense R&D efforts to insert new technology and capabilities into the US Military battery inventory. The Additive Manufacturing (AM) program will continue to collaborate with the Military Services, DLA's Process Owners and Major Subordinate Commands (MSC) to identify technologies that assist with AM enterprise-wide processes that align DLA's identification of hard-to-source parts requirements with MILSVC cognizant engineer authorities and AM manufacturing capabilities to obtain qualified AM parts that support a DLA customer. The DLA R&D AM projects will explore innovative remote inspection capabilities that enable interoperable quality control inspections among DLA, the Military Service cognizant engineers and the manufacturing base. Further analysis of alternatives for remote inspection technologies can render repeatable and accelerated qualifications processes. The convergence of automated requirements' tools developed with DOD consensus of AM risk categorization criteria frameworks, under the DLA-led Joint AM acceptability (JAMA) project in collaboration with OSD R&E and the MILSVCs, will serve as the basis to improve DLA's position in a distributive manufacturing ecosystem to exercise an AM procurement and perform quality assurance of AM parts flowing into the DOD supply chains. Reduction of the AM baseline will commensurately impact the AM Program's ability to produce solutions for enterprise processes and procedures needed to integrate AM into the supply chain and transition benefits and findings of AM R&D projects into the DLA supply chain processes. With limited budget, the AM R&D program can only perform sub-optimized part to part projects under the authority of established support agreements with our Warfighting customers and partners. The Advanced Microcircuit Emulation (AME) program will continue planning and identifying projects for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. It will continue projects both started or in-work during FY 2022. The 40 Volt Operational Amplifier project is anticipated to be completed in the third quarter. Also, the Ion Implanter capability is scheduled for completion during the fourth quarter. AME will continue development of Additive Manufacturing techniques to address obsolescence in Microcircuit Cases. ***FY 2024 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBA / *Industrial Base & Aging Weapon System Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
The Subsistence Network (SUBNET) program will continue to develop and promote manufacturing improvements with R&D projects that leverage emerging technologies and innovations. The SUBNET program will continue to work Congressional Interest research in pre and polyfluoroalkyl substances in packing material used to assemble MREs, research sustainable packaging options for the MREs, research other food sterilization methods to include food irradiation, research sensors from production to storage to food service, and artificial intelligence in food. The program will also continue to pursue Small Business Innovation Research (SBIR) topics in Subsistence. The Casting program will work to review proposals and award new contracts under the Broad Agency Announcement while maintaining its alignment with the DLA Strategic plan and U.S. Casting Industry Roadmap. These projects will work to alleviate problems in the procurement and manufacture of parts that contain metal castings. These problems include dangerous and labor-intensive processes, accuracy of existing modeling and simulation software and tools to predict end item or finished part performance, complex manufacturing processes, resources for sourcing and/or tooling identification, the use of required but obsolete or antiquated specifications/standards and the continued consolidation of manufacturing facilities and resources within the domestic market coupled with fierce competition from foreign sources. The casting program will continue to monitor projects that are awarded in FY23 focused on helping to secure and maintain a viable and vibrant foundry industry as a critical part of the U.S. manufacturing base. The resulting benefits from these projects are an improved manufacturing base and reliable sources of supply with increased spare part availability and a resulting mission readiness for the DLA and the DoD. The Forging program will continue to monitor awarded projects focused on improving manufacturing processes and alternative forging manufacturing methods. Innovative coatings for materials and forging dies, workforce development with tools and resources to help the industry recruit and retain employees, and sensors and smart manufacturing methods. These projects align with the needs of the DoD and DLA aimed and supporting and fulfilling the needs of the warfighter. The Battery Network (BATTNET) program will continue to execute projects for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. Projects will leverage new battery manufacturing technologies for the supply chain that have been developed by industry – advanced electrodes production, low-cost materials production or recycling, and advanced performance cells. The program intends to leverage deep-discharge, long cycle life, safe lithium-ion capabilities with the US Military Services to replace obsolete nickel-cadmium batteries in naval and aviation systems. The Additive Manufacturing (AM) program will use the lessons learned during the Joint Additive Manufacturing Acceptability (JAMA) efforts in the areas of AM parts prioritization, data formats, acceptability criteria and leverage emerging digital business practices, stemming from the information technology modernization efforts in DLA to engage in the testing and prototyping of customer engagement technology peripheral digital services offerings to address the requirements generated at the convergences of the MILSVC digital experiences and DLA digital operations in order to adjust DLA's business models. DLA R&D			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** IBA / *Industrial Base & Aging Weapon System Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
AM will also launch the needed test beds to propel the expansion of the DLA' technical data management capability to include vendor 3D models (industry developed) to establish a repeatable process for AM vendor bids. The Advanced Microcircuit Emulation (AME) program will AME will continue to develop its long-term technology roadmap. It will also continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. Additive Manufacturing for Microcircuit Cases - Phase III project, Small Case 20 Volt Operational Amplifier, Radiation-Hardened Linear microcircuits, and Dual-Voltage Process Development projects are anticipated to be completed. AME will continue to develop capabilities in digital and analog/linear technologies. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024: Industrial Base and Aging Weapon System Support (IBA) baseline was increased by approximately $1.000 million based on an internal funding reallocation decision to address sustainment gaps and bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for solider and system batteries.			
Accomplishments/Planned Programs Subtotals	-	35.222	36.728

	FY 2022	FY 2023
Congressional Add: Flake graphite-based solutions for PFAS contamination ***FY 2023 Plans:*** DLA is seeking additional clarification on the intent & recipient of the Flake graphite-based solutions for PFAS contamination Congressional Add. As clarification is received, a statement detailing execution plans will be provided.	-	5.000
Congressional Add: Steel Performance Initiative ***FY 2023 Plans:*** Develop hybrid and Industry 4.0 manufacturing technologies along with modeling and quantitative nondestructive testing (QNDT) to advance predictive performance design.	-	13.000
Congressional Adds Subtotals	-	18.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / *Manufacturing Technology Program (ManTech)*	Project (Number/Name) TDM / *3D Tech Data Modernization / Model Based Enterprise*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
TDM: *3D Tech Data Modernization / Model Based Enterprise*	0.000	0.000	39.544	9.676	0.000	9.676	9.855	10.042	10.155	10.361	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The three-dimensional (3D) Technical Data Modernization (TDM) / Model-Based Enterprise (MBE) includes efforts to improve and facilitate the exchange of engineering and logistics information among DLA, the Military Services, DLA industry partners and DLA customers. This LOE includes the Military Unique Sustainment Technology (MUST), the Defense Logistics Information Research (DLIR), and the Emergent Manufacturing Technology (EMT) portfolios. A primary focus of this SFA is to capitalize on the emerging "Model Based Enterprise" paradigm and the semantic web as an enabler to a logistics system that is smart and connected up and down the supply chain and across all DLA Customers and suppliers. A major focus is to transform DoD engineering data from two-dimensional paper-based products to three-dimensional computer-based models, and to develop processes to move from "electronic paper" (i.e. PDF files) to technical data files that can interface directly with industries' engineering systems. The benefits include shorter product introduction cycles, lower set up-costs for parts production and more economical small batch production. Objectives for this LOE include:

1. Transform technical data into modern, machine-usable, neutral formats: support DoD's digital modernization efforts and provide significant readiness improvements.
2. Create a model-enabled knowledge base shared among DLA, the Military Services and industry: streamline the delivery of accurate requirements and high-quality material and end-items throughout the supply chain.

The Military Unique Sustainment Technology (MUST) program addresses GAO Report 12-707 recommendations for DoD to establish a "knowledge-based approach" to define, communicate, and collaborate on military unique Combat Uniforms and Individual Equipment (CUIE) requirements. DLA has the responsibility to manage and maintain the technical requirements among the Services and the Defense Industrial Base. Currently there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop, and adopt technologies that can significantly improve the joint process from transitioning new item development to DLA sustainment and operations. The Program focuses on technologies that will transform the military CUIE supply chain from an "electronic paper" (i.e. PDF/MS Word) based manual environment, into a knowledge-based model driven environment. This approach will result in seamlessly communicating military unique technical requirements throughout the end-to-end supply chain, leading toward a Model Based Enterprise.

The Defense Logistics Information Research (DLIR) program researches core technologies to improve the quality, security, and interoperability of logistics data acquisition and management to enable and streamline DLA operations. DLA enables transformation of business practices and methodologies as the data for weapons systems evolve from traditional formats and delivery methods (such as two-dimensional images and PDF formats) to newer, more innovative methods (such as three-dimensional solid models, object-oriented databases, service-oriented architecture (SOA) and Web 3C standards). This transformational shift for DLA is driven by the Model-Based Enterprise (MBE) approach, the way industry is delivering design and development data for weapon systems to the Military Services and the way the

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
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Military Services in turn manage and provide the data to DLA. DLA Logistics Operations, DLA Acquisition, DLA Tech/Quality, and DLA's Major Subordinate Commands (MSCs) are key stakeholders in the DLIR initiatives to modernize the representation and delivery of weapons systems data.

The EMT program addresses emerging and out of cycle requirements that always occur as DLA strives to maintain the readiness of the aging weapon systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Three-dimensional (3D) Technical Data Modernization (TDM) / Model-Based Enterprise (MBE) (R&D LOE 2)	0.000	10.944	9.676

Description: Funding and efforts for the 3D Tech Data Modernization / Model Based Enterprise (TDM) Line of Effort (R&D LOE 2) begins in FY 2023. FY 2022 efforts related to this LOE are outlined in the R-2A for Improving Technical and Logistics Information (OOO) SFA.

FY 2023 Plans:
The Military Unique Sustainment Technology II (MUST II) program focus is to integrate the MUST developed tools into the DML using an Application Program Interface (API). The Interim Change Management System (ICMS) tool will be a new development for capturing and managing Interim Changes (IC) to the technical requirements. MUST plans to develop more powerful AI based tools to incorporate ICs into the base models, and to extract technical requirements from the digital models. The MUST program will work with the Services to promote the use of data formats compatible with the digital document model paradigm. The DML document models will become the authoritative source for CUIE technical requirements and provide common accessibility and visibility to all stakeholders. These models can be efficiently managed (queried, analyzed, updated) and will be capable of supplying data directly to Combat Uniform and Individual Equipment (CUIE) test plans and manufacturing processes. Joint processes will be reengineered to take advantage of the digital model data. For example, use in the Product Quality Deficiency Report. Prototype tools and interfaces will also be developed to improve digital model utility for the industrial base.

The Defense Logistics Information Research (DLIR) program will continue to support DLA's Technical Data Management Transformation (TDMT) efforts to determine IT architecture needs and to ensure DLA's MBE architecture meets/exceeds DOD compliance objectives and integrates with Military Services irrespective of platforms. DLIR will complete the Digital Rights Management (DRM) project to improve the security of TDPs and support the eventual development of functional requirements for the "Catalog of the Future" (COTF). Finally, DLIR will collaborate with MxD focusing on cybersecurity and building the digital thread leveraging the Air Force KC135 and the Army's Paladin Artillery Systems to include providing access to a low-cost, cloud-based, Product Lifecycle Management (PLM)/Product Data Management (PDM) system(s).

The Emerging Manufacturing Technology (EMT) program will continue to enable DLA's investigation of new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts.

FY 2024 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
The Military Unique Sustainment Technology II (MUST II) program will develop a strategy to integrate Services PLM data as a "front end" to the MUST Knowledge Base. In this vision, MUST Knowledge Base tools and capabilities interface with PLM via Application Programming Interfaces as Items prepare for, and transition to DLA Sustainment. The ICMS tool working prototype and the DML working prototype will be delivered and available for transition into an operational capability. Technical data content in the DML will continue to be expanded and the AI needed to make the DML information available throughout the supply chain will be enhanced. The major effort of integration into Military Services development organizations and the industrial base will be undertaken. The Defense Logistics Information Research (DLIR) program will DLIR will continue to support DLA's Technical Data Management Transformation (TDMT) efforts to determine IT architecture needs and to ensure DLA's MBE architecture meets/exceeds DOD compliance objectives and integrates with Military Services irrespective of platforms. DLIR will continue collaboration with MxD focusing on cybersecurity and building the digital thread completing the conversions of selected NSNs to 3D, model-based formats, producing first articles, and demonstrating to the cognizant Engineering Support Activity (ESA) that the model-based TDP can be the authoritative TDP. The Emerging Manufacturing Technology (EMT) program will continue to enable DLA's investigation of new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant changes from FY 2023 to FY 2024.			
Accomplishments/Planned Programs Subtotals	0.000	10.944	9.676

	FY 2022	FY 2023
Congressional Add: AI based market research system	-	3.000
FY 2023 Plans: Conduct an R&D pilot that applies AI to improve the nation's military industrial base, accelerate the contracting processes, and diversify and strengthen the supply chain. Once completed the pilot's data will provide a framework and blueprint to dramatically improve both readiness and resiliency of the Defense Industrial Base (DIB) at scale within the DOD.		
Congressional Add: Supply Chain Readiness Improvement Program	-	5.000
FY 2023 Plans: Using readily available data mining techniques, DoD could manage the unawarded solicitations list in several ways: speed of delivery, quality of part, etc. Proving this capability through short-term		

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** TDM / *3D Tech Data Modernization / Model Based Enterprise*

	FY 2022	FY 2023
demonstration will bring additional industry providers to the table and show increase in capability and reduction in costs across the DoD.		
Congressional Add: Battery Grade Graphite ***FY 2023 Plans:*** The purpose of this additional effort is to reestablish domestic production capability of legacy ATJTM isostatically molded graphite using a US supply chain and US manufacturing facility. The project seeks to qualify a new domestic source of raw materials and produce a qualification batch of 8 tons of ATJ graphite. After qualification testing and acceptance by customers, there will be a source of ATJ at a capacity level of up to 3,000 tons per year of isostatically molded graphite as a drop-in replacement for the legacy ATJ material. At the end of this program, the US will again have a domestic source of strategically important large isostatically molded graphite billets used for rocket nozzles and ablative materials produced by a US-owned company.	-	3.600
Congressional Add: High performance magnets ***FY 2023 Plans:*** Focus would be on using CA funding for qualifying domestic NdFeB Rare Earth Magnet Production Qualification Plans for Defense Industrial Base: Excalibur, Peregrine, JDAM + SDB Programs. Urban Mining Company proposed a Magnet-to-Magnet recycling system that takes waste magnets from end-of-life appliances, reduces them to powder, and finally reforms them into new magnets with magnetic properties like, or, better than starting materials. This process could alleviate supply risk in the US by largely operating outside of the conventional magnet supply chain.	-	5.000
Congressional Add: Hypersonic radomes and apertures ***FY 2023 Plans:*** In order to leverage ongoing Hypersonic technology developmental efforts by AFRL, AFWERX, MDA, and DARPA to accelerate manufacturing readiness of Hypersonic radomes/apertures that are essential to achieving the rigorous performance and survivability requirements of Hypersonic weapons, Mentis Sciences, of Manchester, NH, brings significant expertise to bear on several potential solutions. Specifically, Mentis will 1) focus and accelerate the development of Mentis Advanced Pre-Ceramic Composite Radomes and Apertures, 2) leverage Mentis competencies in the: design, development, and production of Ox/Ox preforms and structures; RF Aperture design, characterization, and testing; and aerothermal platform design, testing and analysis to mature material solutions to TRL / MRL 6 requirements and 3) demonstrate capabilities and limits leveraging component testing tech demonstration platform tests at LHMEL, AEDC; White Sands Missile Range to advance Hypersonic Ox/Ox Requirements.	-	5.000
Congressional Add: Nanostructured iron nitride permanent magnets ***FY 2023 Plans:*** Niron Magnetics proposed the use of Iron Nitride as means of reducing the use of rare earths for the manufacture of high-performance permanent magnets. Iron Nitride is a high performance, completely	-	7.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603680S / *Manufacturing Technology Program (ManTech)*	**Project (Number/Name)** TDM / *3D Tech Data Modernization / Model Based Enterprise*

	FY 2022	FY 2023
rare earth free permanent magnet technology. A key differentiator to Niron's magnet technology is powder particle coating by Atomic Layer Deposition (ALD) in a fluidized bed reactor. ALD is a ground-breaking powder conditioning technology that provides two benefits to Niron's iron nitride magnets: 1) passivation of the nanoparticle surface, preventing oxidation, and 2) magnetic isolation of the nanoparticles, improving their ability stay fully magnetized. The unique characteristics of iron nitride include a magnetic strength higher than most grades of NdFeB permanent magnets. A new project that continues this work is in the process of being initiated. The intent is to advance the technology and manufacturing readiness of non-rare earth containing iron nitride permanent magnets, for use in military electric components and systems. A four-task program is currently envisaged. The first aims to identify alloying elements that would maximize iron nitride magnet performance and develop an electric machine design that incorporates iron nitride permanent magnets; The second task is to synthesize iron oxide nano particles (IONPs) for reduction and nitriding at pilot scale (10 kg). The third task is to develop scalable processes to reduce, nitride, and passivate IONPs. The final task is to develop iron nitride permanent magnets with an energy product of 15 MGOe.		
Congressional Adds Subtotals	-	28.600

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency											Date: March 2023	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*							
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
Total Program Element	95.775	12.325	13.663	16.580	-	16.580	16.896	17.179	17.464	17.794	Continuing	Continuing
EMM: *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*	17.338	3.166	-	-	-	-	-	-	0.000	-	Continuing	Continuing
GLTD: *Improving Logistics Processes (formerly Logistics Process)*	29.061	5.528	-	-	-	-	-	-	0.000	-	Continuing	Continuing
04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	49.376	3.631	-	-	-	-	-	-	0.000	-	Continuing	Continuing
LOI: *Logistics Operations Innovation*	0.000	0.000	6.088	7.391	-	7.391	7.533	7.659	7.786	7.930	Continuing	Continuing
PAM: *Predictive Analytics / Modeling & Simulation*	0.000	0.000	3.872	3.914	-	3.914	4.013	4.100	4.187	4.286	Continuing	Continuing
SWM: *Smart-Warehouse Modernization*	0.000	0.000	3.703	5.275	-	5.275	5.350	5.420	5.491	5.578	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) is responsible for providing to the Military Services, other Federal Agencies, as well as combined and allied forces, the full spectrum of logistics, acquisition and technical services. DLA sources and provides virtually 100 percent of the consumable items the military services need to operate – including food, uniforms, fuel and energy, medical supplies, construction and barrier materials, equipment, and more than 85 percent of the military's spare parts. DLA also provides logistics related services such as logistics information data management, the reutilization of military equipment, as well as documents automation and production services. DLA's Logistics Research and Development (Log R&D) program helps ensure that advanced logistics concepts and business processes are used to accomplish the agency's mission with the leanest possible infrastructure. Log R&D identifies the best commercial business practices and tailors them, as necessary, into the most effective business processes for the agency. Log R&D develops and demonstrates high risk, high payoff technology that provides a significantly higher level of support at the lowest possible costs.

Beginning in FY 2023, the DLA Log R&D Program Element shifts from three Strategic Focus Areas to three Lines of Effort (LOEs): Predictive Analytics, Modeling & Simulation (R&D LOE 3), Logistics Operations Innovation (R&D LOE 4), and Smart Warehouse Modernization (R&D LOE 5). These LOEs are closely aligned to

documented and tracked priorities specified in the most current DLA Strategic Plan, that calls for Digital Business Transformation as one of three critical capabilities to achieve DLA's business goals of enhancing performance, reducing costs, and becoming more predictive and data driven. This critical capability also seeks to transform systems and processes to improve data transparency, reliability, and security for our employees, customers, and suppliers. DLA's initiatives within this critical capability align with the interim National Security Strategy (NSS) by emphasizing the importance of harnessing rapid emerging technologies that will transform how we do business.

- Predictive Analytics, Modeling & Simulation (R&D LOE 3): R&D efforts develop predictive analytic solutions using data and Artificial Intelligence/Machine Learning (AI/ML) to solve high-impact problems, improve business operations, and provide actionable strategies to inform business decisions. Primarily focused on the DLA Strategic Plan Critical Capability C: Digital Business Transformation, these LOE efforts cut across DLA Strategic Plan LOE 1: Warfighter Always, LOE2: Trusted Mission Partner, and LOE 4: Modernized Acquisition and Supply Chain Management, supporting the warfighter through the Logistics Technology Research (LTR), formally Weapon System Sustainment (WSS), portfolio of projects..

- Logistics Operations Innovation (R&D LOE 4): R&D efforts to cultivate integration of innovative processes and technology into the DLA supply chains to enhance warfighter readiness and weapons system sustainment. This LOE focuses on supporting the DLA LOE 4: Modernized Acquisition and Supply Chain Management, while also investment in cross-cutting supply chain efforts, to include fuel quality and alternative fuel sources, or emergent needs that impact DLA's ability to effectively support the warfighter through the following portfolios: Energy Readiness Program (ERP), Acquisition Modernization Technology Research (AMTR), and Supply Chain Management (SCM).

- Smart Warehouse Modernization (R&D LOE 5): R&D efforts to modernize distribution and disposition operations through infusion of smart-warehousing, interconnected technologies, and automation. This LOE is dedicated to one of the primary focus areas of DLA's Critical Capability for Digital Business Transformation: warehousing modernization through efforts within the Strategic Distribution and Disposition (SDD) portfolio of projects.

Until the shift from SFAs to LOEs in FY 2023, DLA LOG R&D remains aligned into three Strategic Focus Areas (SFAs) for FY 2021 and FY 2022: 1) Enhancing Analysis, Modeling, and Decision Support (EAMD), 2) Improving Logistics Processes (ILP), 3) Emergent Logistics R&D Requirements (ELR).

- The EAMD SFA includes efforts to develop decision support tools, such as modeling, simulation, and other analytics to improve operational strategy decision-making, forecasting, and procurement, which support more effective and efficient responses to emerging market and customer requirements.
- The ILP SFA includes efforts to develop and implement advanced technology in logistics processes over and above current baseline systems.

- The ELR SFA includes efforts to support emergent Logistics R&D requirements that arise out of the budget cycle. These out of cycle requirements always occur. This SFA begins new projects in a timely manner without disrupting ongoing projects by funds reallocation. This SFA scope includes all DLA supply chains and logistics processes.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603712S *I Logistics Research and Development Technology (Log R&D)*

DLA's focus for this budget cycle highlights advanced capabilities in digital and technical data modernization, management and analytics to transform DLA Business Processes to lower the Agency's material acquisition and operation costs along with improving weapons systems support. This effort spans across both DLA R&D Program Elements and multiple R&D LOEs, impacting across the DOD Joint Defense Manufacturing Technology Panel and DLA Enterprise logistics processes.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	12.418	13.663	13.994	-	13.994
Current President's Budget	12.325	13.663	16.580	-	16.580
Total Adjustments	-0.093	0.000	2.586	-	2.586
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.338	-			
• SBIR/STTR Transfer	-0.431	-			
• Internal Reallocation	-	-	2.500	-	2.500
• Labor Inflation	-	-	0.015	-	0.015
• Non-labor Inflation	-	-	0.071	-	0.071

Change Summary Explanation

Internal Reallocation FY 2024: Logistics Operations Innovation (LOI) baseline was increased by $1.000 million based on internal funding reallocation decision to establish R&D rapid innovation capability and support IT digital modernization priorities. Smart-Warehouse Modernization (SWM) baseline was increased by $1.500 million based on internal funding reallocation decision to modernize DLA's warehousing and distribution processes by leveraging automation, Big Data, and predictive analytics to make data-driven decisions, improve productivity and cost effectiveness, and realize returns on investment as agency savings.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** EMM / *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EMM: *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*	17.338	3.166	-	-	-	-	-	-	0.000	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Strategic Focus Area (SFA) funds developments in advanced analytical tools, modeling, and simulation of logistics and supply chain processes. These tools will improve DLA forecasting and procurement strategy decisions and lead to faster and more flexible responsiveness to emerging market and customer requirements. This SFA consists of two programs:

The Strategic Distribution & Disposition (SDD) Program collaborates with DLA Distribution and Disposition Services to identify legacy capabilities that are inadequate for emerging worldwide distribution and disposition requirements. A key objective of the SDD Program is to anticipate, assess, and meet the current and future Warfighter requirements by leveraging R&D to infuse innovation into solutions. Long-term objectives include mitigating the DOD Supply Chain Management high risk issues identified by the Government Accountability Office (GAO), 2018 (Inventory Management, Material Distribution and Asset Visibility).

*In FY 2023, this SFA, Enhancing Analysis, Modeling, and Decision Support (EMM), closes out. The SDD program shifts to the Smart-Warehouse Modernization (SWM) Line of Effort (see R-2A).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Enhancing Analysis, Modeling, and Decision Support	3.166	-	-
Description: The Strategic Distribution and Disposition (SDD) program continued to lay the groundwork for DLA's Smart Warehouses. During FY22, SDD met with vendors and potential vendors, and continued research of the technologies required to implement smart warehousing solutions. The SDD program provided applied research, analytical and decision support to DLA Distribution and Disposition Services and provided support to the Distribution Modernization Program (DMP). Additionally, SDD will continue to engage with Industry, Department of Defense (DoD) sponsored Federally Funded Research and Development Centers (FFRDCs) and University-Affiliated Research Center Laboratories (UARCs) leveraging subject-matter expertise in key areas of research such as Blockchain, Artificial Intelligence, Machine Learning, Internet of Things (IoT), Augmented Reality, and Autonomous/Robotics systems. SDD will continue to incorporate Integrate Project Teams (IPT) for project collaboration and Integrated System Engineering concepts (test and evaluation) into Distribution projects.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** EMM / *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Completed the Phase I Small Business Innovative Research (SBIR) Autonomous Guided Vehicle (AGV) case study to prove out DLA's acquisition approach for implementing AGV technology in the Warehouse processes at the DLA Distribution Center Hill, and DLA Distribution Center Corpus Christi which lack automated material technology such as AGVs to move material between tunnels and warehouses. Current material process is with forklift and designated driver. This project concluded with no plans to proceed to Phase II due to the vendor's low Technical Readiness Level (TRL) 3. When funding levels are adequate SDD will revisit more Phase I research to provide a proof of concept to ascertain the utility, feasibility, maintainability, and cost-effectiveness of using AGVs to improve inventory efficiency. This project concluded in FY22Q1. - Completed the Phase I Small Business Innovative Research (SBIR) DLA Warehouse Artificial Intelligence (AI) case study to prove out DLA's acquisition approach for implementing AI technology in the Warehouse processes. Currently DLA Distribution is unable to predict when items and material arrives at its Distribution Warehouses ad this inability to predict the induction of inventory and material consequently increases lead times, operational costs, and incurs human error. This project concluded with no current plans to proceed to Phase II due to the low Technical Readiness Levels (TRLs) of 1 to 3 for the three vendors who participated in this research pilot. When funding levels are adequate SDD will revisit more Phase I research to provide a proof of concept to ascertain the utility, feasibility, maintainability, and cost-effectiveness of using AI to improve inventory efficiency and predict the induction of inventory and material at the DLA Distribution Centers. This project concluded in FY22Q4. - Completed the Phase II Small Business Innovative Research (SBIR) Augmented Reality (AR) case study to prove out DLA's acquisition approach for implementing AR technology in the Warehouse Picking process. This project continued to develop a prototype augmented reality system in a DLA warehouse environment and will provide a proof of concept to ascertain the utility, feasibility, maintainability, and cost-effectiveness of using AR to improve inventory efficiency. This project concluded in FY22Q2. - Adjusted project funding priorities to FY 2024 for Automated Storage and Retrieval Systems (AS/RS), In-Transit Visibility (ITV), AI imbedded Robotic Arms, and a Systems of Systems Smart Warehouse.			
Accomplishments/Planned Programs Subtotals	3.166	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** EMM / *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	Project (Number/Name) GLTD / *Improving Logistics Processes (formerly Logistics Process)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
GLTD: *Improving Logistics Processes (formerly Logistics Process)*	29.061	5.528	-	-	-	-	-	-	0.000	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Improving Logistics Processes (ILP) Strategic Focus Area (SFA) encompasses R&D efforts within the Logistics Technology Research program, formerly Weapon System Sustainment (WSS), and the Acquisition Modernization Technology Research (AMTR) program to support DLA business functional units through applied research and development of advanced technologies to improve business processes and operational methods, leverage the application of leading edge logistics "out-of-the box" concepts using disruptive technology business tools, and support DLA's technological transformation effort. To qualify for R&D funding, the R&D effort must develop and apply technology and processes over and above current baseline IT systems and continuous improvements efforts.

Although all DLA processes are in scope, the strategic focus for this budget cycle is in Procurement, Planning, Technical Quality and the Major Subordinate Commands.

Innovative process changes and new technologies will be researched in these areas to drive improvements to internal costs, reduce award delays, and improve material availability, supply chain security, demand forecasting and logistical planning. This will be accomplished through the use of Artificial Intelligence/Machine Learning (AI/ML), blockchain technology, and research of emerging commercial best practices and technologies.

*In FY 2023, this SFA, Improving Logistics Processes (GLTD), closes out. The LTR program shifts to the Predictive Analytics / Modeling & Simulation (PAM) Line of Effort (see R-2A) and the AMTR program shifts to the Logistics Operations Innovation (LOI) Line of Effort (see R-2A).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Improving Logistics Processes (ILP)	5.528	-	-
Description: The Logistics Technology Research program, formerly Weapon System Sustainment (WSS), conducted research to advance DLA's predictive analytics capabilities that included: - Completed an assessment of quantum computing capabilities in government and industry. The program will continue to monitor this capability and pursue additional research as it progresses. - Continued research into tools and best practices for developing sustainable metadata management processes and supporting organizational structures to harness the power of analytics and artificial intelligence (AI) to improve its operations. -Completed the first phase of supply chain risk management research that provided insight on information available for supply chain illuminations and potential ways to use AI/ML to enhance supply chain risk management capabilities. A second phase started to expand on the AI/ML research.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** GLTD / *Improving Logistics Processes (formerly Logistics Process)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Initiated environmental testing for transparent armor to provide data to develop and validate testing tools and a mathematical model that will predict transparent armor lifespan and allow for the purchase of best value parts. - Initiated transition of a digital traceability capability to automate manual workflow processes for vendor documentation for the Joint Certification Program (JCP), Enhanced JCP, Counterfeit Detection and Avoidance Program (CDAP) and the Trade Security Control (TSC) Programs. The transition is expected to complete in FY2024. The Acquisition Modernization Technology Research (AMTR) program became fully operational during FY 2022 which began transition in FY 2021 for acquisition modernization efforts that were previously managed and executed under the Logistics Technology Research (LTR) program, formerly Weapons Systems Sustainment (WSS). The program continues earlier efforts to expand market intelligence capabilities (AMIDA) to the remaining DLA supply chains. The transition of the capability to Aviation is well underway, and the Energy pilot will begin in September 2022. Phase II of Contract Quality Control was also initiated, continuing research of commercial best practices for contract quality control (CQC) systems to recommend a state-of-the-art system for all DLA major subordinate commands. AMTR will continue collaboration efforts on the Integrated Manufacturing Readiness Logistics Support (IMRLS) Milestone 2 project which will test the ability of DLA to rapidly make parts by converting 2D tech data to CAD and using a pricing engine to solicit bids from a wide selection of vendors.			
Accomplishments/Planned Programs Subtotals	5.528	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** 04 / *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	49.376	3.631	-	-	-	-	-	-	0.000	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Emergent Logistics R&D Strategic Focus Area (SFA) includes R&D efforts to develop new products and services for DLA customers in two programs:

The Energy Readiness Program (ERP) roadmap helps to achieve the operational energy strategy goals of increasing sources of supply, developing and implementing alternative fuels under the ERP.

The Supply Chain Management (SCM) program addresses emergent and out of budget cycle requirements and opportunities within DLA's supply chains. A key objective of the SCM Program is to collaborate with customers (DLA J-Codes and Major Subordinate Commands (MSCs)) to identify capability shortfalls that can be addressed through major research efforts. These R&D efforts strive to develop technology mitigation strategies that address current and anticipated problems within DLA's supply chains.

*In FY 2023, this SFA, Emergent Logistics R&D Requirements (04), closes out. The ERP and the SCM programs shift to the Logistics Operations Innovation (LOI) Line of Effort (see R-2A).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Emergent Logistics R&D Requirements	3.631	-	-
Description: The Energy Readiness Program (ERP) continued working with Military Service customers and technical offices to improve specifications and standards for fuel and additive quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for military customers. Accomplishments include: - Continued work on the Wood to Jet Fuel Program study with the University of Maine to the development of a biofuels capability able to support commercial and military fuels requirements through forestry feedstock material diverted from decreasing industries through the production of marketable coproducts for alternative/renewable fuel.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** 04 / *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Continued work on the Investigation of Waste-Based Feedstocks for Sustainable Aviation Fuel Production project with the University of Hawaii project that supports the production, adoption, and use of sustainable bio-based aviation fuel, a much-needed alternative to petroleum legacy fuels. Initial fuel streams of interest include construction and demolition waste and others of relevance to Defense Production Act projects. - Completed Phase I and began Phase II of the Thermal Stability Heater Tube Evaluation project that investigates the maximum hydraulic fluid contamination level for fuels de-fueled from aircraft and identify the specification requirement(s) that are significantly impacted by fluids currently on the DoD qualified products list. - Completed Phase I and began Phase II Small Business Innovation Research project for a Lubricating Oil Study to develop a screening tool using software technology that monitors lubricating oil conditions as it transits through the acquisition chain. Conditions are tracked from refinery/manufacturer to receipt/storage tanks by “fingerprinting” its physical properties, screening for anomalies, and flagging for borderline specification properties or out-of-tolerance conditions. The Supply Chain Management (SCM) program completed the BEMR Lab prototype demonstration of an Augmented Reality (AR) remote expert capability and continued work on the Advanced Modeling and Optimization of Supply Chains (AMOS) supply chain simulator in support of contingency operations. Additionally, SCM completed a study of available solutions that provide multi-tiered vendor supply chain management options for DLA’s known NSNs with castings, forgings, and specialty metals and initiated efforts to support the “greening” of selected DLA supply chain elements.			
Accomplishments/Planned Programs Subtotals	3.631	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The DLA R&D program is executed through Delivery Orders placed on Indefinite Delivery/Indefinite Quantity Contracts that resulted from competitive Broad Agency Announcements and through interagency agreements with the Military Services when it is cost effective and/or provides some technical advantage, e.g. improves the probability of successful transition. DLA also has a continuously open Broad Agency Announcement for Emerging Technologies.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	Project (Number/Name) LOI / *Logistics Operations Innovation*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
LOI: *Logistics Operations Innovation*	0.000	0.000	6.088	7.391	-	7.391	7.533	7.659	7.786	7.930	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Logistics Operations Innovation Line of Effort (LOE) seeks to improve DLA supply chain performance and security through the integration of advanced technology and innovative processes within the DLA day-to-day business operations. Research in these areas drive improvements to internal costs, reduce award delays, and improve material availability, supply chain security, and logistical planning. This will be accomplished through the use of artificial intelligence/machine learning, blockchain technology, and research of emerging commercial best practices and technologies. In addition, out of cycle emergent technologies across all DLA supply chains and logistics processes are resourced in a timely manner without disrupting ongoing projects by funds reallocation. The objectives for this LOE include:

1. Secure supply chains: Improvements to the DoD Class III Bulk Fuel Petroleum, Oil and Lubricants supply system
- New or improved analytical methods to determine product quality of identify anomalies
- Renewable energy technologies for military and government use
- Enhanced military adoption and use of fuel products derived from petroleum alternatives

2. Technical Solutions for anti-counterfeiting detection: innovative solutions to prevent counterfeit parts in the logistical supply chain.
- Reduced supply chain vulnerabilities through low-cost anti-counterfeiting solutions

3. Integrated logistics and acquisition information that yields cost savings and shortens lead times:
- A “Supply Chain Digital Twin” capability to perform system-wide end-to-end supply chain optimization modeling and simulation
- Supply chain optimization, scenario evaluation, and risk assessment for contingency operations
- Supply chain sustainability: increase the use of renewable, reusable, recyclable resources; source materials and products that reduce negative impact on environment, human health, and depletion of non-renewable resources
- An enterprise market intelligence capability to optimize spending strategies and business outcomes
- An automated contract quality capability that will result in a higher percentage of contracts executable upon award and subsequently a reduction of Production Lead Time
- Improved e-commerce and supplier bidding systems

The Logistics Operations Innovation LOE includes R&D efforts to develop new products and services for DLA customers in three programs:

The Energy Readiness Program (ERP) roadmap helps to achieve the operational energy strategy goals of increasing sources of supply, developing and implementing alternative fuels under the ERP.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** LOI / *Logistics Operations Innovation*

The Acquisition Modernization Technology Research (AMTR) program officially established in FY 2022. Many of the current efforts were initiated and funded under the Logistics Tech Research (LTR) Program; however, because of the increasing focus on DLA Acquisition modernization to enhance market intelligence capabilities, improve contract quality, and enable best value acquisitions, these efforts transitioned to a dedicated program. These and similar efforts will be managed by the AMTR program in close coordination with DLA J7 moving forward.

The Supply Chain Management (SCM) program addresses emergent, out of budget cycle requirements and opportunities within DLA's supply chains. A key objective of the SCM Program is to collaborate with customers (DLA J-Codes and Major Subordinate Commands (MSCs)) to identify capability shortfalls that can be addressed through major research efforts. These R&D efforts strive to develop technology mitigation strategies that address current and anticipated problems within DLA's supply chains.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Logistics Operations Innovation Line of Effort (R&D LOE 4)	-	6.088	7.391
Description: Funding and efforts for the Logistics Operations Innovation Line of Effort (R&D LOE 4) begins in FY 2023. FY 2022 efforts related to this LOE are outlined in the R-2A for Improving Logistics Processes (GLTD) under the Acquisition Modernization Technology Research (AMTR) program, and the R-2A for Emergent Logistics R&D Requirements (04) under the Energy Readiness Program (ERP) and Supply Chain Management (SCM) program. ***FY 2023 Plans:*** The Energy Readiness Program (ERP) program will continue working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers. ERP will focus on determining R&D solutions for ongoing issues affecting fuel and fuel additive quality and operational requirements (e.g., thermal stability, storage stability, ignition capability) and providing additional alternatives for military unique fuels. With the current administration's increased focus and climate change initiatives and alternatives to petroleum products, the program's efforts to assist the military services in the qualification and certification of alternative fuels to meet military specification requirements are anticipated to increase significantly. The Acquisition Modernization Technology Research (AMTR) program will continue efforts to expand market intelligence capabilities (AMIDA) to DLA supply chains. The transition of the capability to Energy will be completed and the L&M pilot will begin in FY 2023. The IMRLS effort will continue, with plans to incorporate an IMRLS transition plan into the DLA enterprise which will be conducted during the 3rd milestone. Additionally, AMTR will investigate new projects that were addressed during the Acquisition Modernization Program groundwork study, including accelerating e-commerce procurement methods and introducing improved capabilities for the current DIBBS vendor bidding system.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** LOI / *Logistics Operations Innovation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
The Supply Chain Management (SCM) program will continue work on the Advanced Modeling and Optimization of Supply Chains (AMOS) supply chain simulator in support of contingency operations and initiate feasibility studies in multiple areas including asset visibility, dynamic network analysis, information mapping, and disposition technologies. ***FY 2024 Plans:*** The Energy Readiness Program (ERP) program will continue working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers. ERP will focus on determining R&D solutions for ongoing issues affecting fuel and fuel additive quality and operational requirements (e.g., thermal stability, storage stability, ignition capability) and providing additional alternatives for military unique fuels. With the current administration's increased focus and climate change initiatives and alternatives to petroleum products, the program's efforts to assist the military services in the qualification and certification of alternative fuels to meet military specification requirements are anticipated to increase significantly. The Acquisition Modernization Technology Research (AMTR) program will continue to focus on efforts to expand market intelligence capabilities to the DLA supply chains. Transition of the capability to L&M and a pilot and transition at Disposition Services will be completed in FY 2024. Other planned efforts include using Digital Twin / Digital Thread, implementing a mission management tool to better align resources to requirements, and modernizing the cataloging process. The Supply Chain Management (SCM) program will begin transition of the Advanced Modeling and Optimization of Supply Chains (AMOS) supply chain simulator in support of contingency operations and continue research efforts in asset visibility, dynamic network analysis, information mapping, and disposition technologies. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024: Logistics Operations Innovation (LOI) baseline was increased by $1.000 million based on internal funding reallocation decision to establish R&D rapid innovation capability and support IT digital modernization priorities.			
Accomplishments/Planned Programs Subtotals	-	6.088	7.391

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	Project (Number/Name) PAM / *Predictive Analytics / Modeling & Simulation*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
PAM: *Predictive Analytics / Modeling & Simulation*	0.000	0.000	3.872	3.914	-	3.914	4.013	4.100	4.187	4.286	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Predictive Analytics, Modeling & Simulation Line of Effort (PAM) (R&D LOE 3) encompasses R&D efforts within the Logistics Technology Research (LTR) program. The focus of R&D LOE 3 is to develop predictive analytic solutions by applying AI/ML algorithms to data obtained from DLA and external sources which can help solve high-impact problems, improve business operations, and provide actionable strategies for optimized business decisions. Through the development of decision support tools, such as modeling, simulation, and other analytics to improve operational strategy decision-making, forecasting, and procurement, DLA will achieve more effective and efficient responses to emerging market and customer requirements. The objectives for this LOE include:

1. Leverage technological solutions for data analytics and integration for demand projections and supply chain risk management.
2. Data analytics integration for DLA, the military services and industry: allows businesses and vendors to aggregate data, analyze it, and transform it into useful information.
3. Explore emergent technologies in quantum computing and edge computing to enable advanced analytics.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Predictive Analytics, Modeling & Simulation Line of Effort (R&D LOE 3)	-	3.872	3.914
Description: Funding and efforts for the Predictive Analytics, Modeling & Simulation Line of Effort (R&D LOE 3) begins in FY 2023. FY 2022 efforts related to this LOE are outlined in the R-2A for Improving Logistics Processes (GLTD) under the Logistics Technology Research (LTR) program.			
FY 2023 Plans: The Logistics Technology Research (LTR) program will: conduct additional research into AI/ML enabled demand projection improvements to complement work initiated by the Joint Artificial Intelligence Committee focused on low, infrequent demand items; continue exploration of blockchain technology by identifying high value use cases based on business need and potential return on investment through an internal business process assessment; continue efforts to improve supply chain risk management identified in FY 2022. In addition to development of AI/ML models for supply chain disruptions, digital supply chain twins will be explored to identify and mitigate risks. This research is expected to continue into FY2024.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** PAM / *Predictive Analytics / Modeling & Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Complete research started in prior years and transition as applicable: Research for an enterprise-wide digital vendor on-boarding process to register, analyze, and validate suppliers to reduce duplication, improve timeliness, and the ability to tailor supply chain risk analytics to each program started late in FY22 will continue; develop transparent armor best value models; research metadata management, data quality, and data curation capabilities. ***FY 2024 Plans:*** The Logistics Technology Research (LTR) program will continue predictive analytics research through execution of AI/ML research based on high value use cases identified by the agency leadership, and research incorporating edge computing technology into DLA business processes to complement predictive analytics capabilities. LTR will continue supply chain risk management research through exploration of data lakes and other data analytics integration methods to store classified and unclassified data for supply chain risk analysis and AI/ML applications. Additional risk identification and mitigation capabilities will be explored. One or more blockchain pilot studies will be conducted based on use case research completed in FY2023. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant changes from FY 2023 to FY 2024.			
Accomplishments/Planned Programs Subtotals	-	3.872	3.914

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	Project (Number/Name) SWM / *Smart-Warehouse Modernization*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
SWM: *Smart-Warehouse Modernization*	0.000	0.000	3.703	5.275	-	5.275	5.350	5.420	5.491	5.578	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Smart Warehouse Modernization Line of Effort (R&D LOE 5) will assess and test cyber-secure smart-warehouse technologies to transform and modernize distribution and disposition operations. The objectives for this LOE include:

1. Increase productivity and efficiency through interconnected technologies and automation such as enhanced inventory management, materiel distribution, and asset visibility
2. Provide enhanced and cyber-secure operations

The Strategic Distribution & Disposition (SDD) Program collaborates with DLA Distribution and Disposition Services to identify legacy capabilities that are inadequate for emerging worldwide distribution and disposition requirements. A key objective of the SDD Program is to anticipate, assess, and meet the current and future Warfighter requirements by leveraging R&D to infuse innovation into solutions. Long-term objectives include mitigating the DOD Supply Chain Management high risk issues identified by the Government Accountability Office (GAO), 2018 (Inventory Management, Material Distribution and Asset Visibility).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Smart Warehouse Modernization Line of Effort (R&D LOE 5)	-	3.703	5.275
Description: Funding and efforts for the Smart Warehouse Modernization Line of Effort (R&D LOE 5) begins in FY 2023. FY 2022 efforts related to this LOE are outlined in the R-2A for Enhancing Analysis, Modeling, and Decision Support (EMM) under the Strategic Distribution and Disposition (SDD) program.			
FY 2023 Plans: The Strategic Distribution and Disposition (SDD) program will continue to provide applied research, analytical and decision support to DLA Distribution and Disposition Services and provide support to the Distribution Modernization Program (DMP). SDD will continue to engage with Industry, DOD sponsored FFRDCs and UARCs leveraging subject-matter expertise in key areas of research such as 5G Networks, Sensor Internet of Things (IoT), Blockchain, Quantum Computing, Artificial Intelligence/ Machine Learning (AI/ML), and leverage the benefits realized from proven research studies and pilot projects in the areas of AR, AS/RS, Performance Management, Automated Inventory, 3D Warehouse Mapping, and Autonomous/Robotics systems (e.g., Autonomous Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs), etc.). SDD will continue to incorporate IPTs for project collaboration and Integrated System Engineering concepts (test and evaluation) into Distribution projects.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** SWM / *Smart-Warehouse Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
During FY 2023 SDD plans focus on upgrading current data architectures to manage and handle the evolution of “Big Data” in the digital revolution through the exploration of the fundamental shifts in network and wireless performance as classified with the 5Vs Concept: Volume – The need for high volume of data; Velocity – The need to generate and process data at high speed; Variety – The types of data (i.e., Policies, photographs, graphs, PDF/MS/Excel files, etc.); Veracity – The need for accuracy and trustworthiness of the data (cybersecurity); and Value – The need to enable smarter and better decision making. Efforts will include: - 5G Network technology needed to enhance the connectivity and speed of mobile devices to communicate data for DLA’s inventory management activities, material distribution activities, and asset visibility activities. - Sensor IoT technology applications to enhance DLA’s data collection and implement the nine principal technologies are used to create a smart warehouse where machines, systems, and humans communicate to coordinate and monitor progress on the warehouse floor. IoT supports the opportunity to obtain “Big Results” and to improve services, productivity, lower downtime, and contributes to deep learning. - Blockchain to reduce the complexity of ordinary transactions and ensure data integrity, ensure all parties provide consensus before new transactions are added to the network, eliminate or reduce paper processes, speed up transaction times and increase efficiencies, enhance the ability to more securely track/trace transactions, and use cryptographic algorithms to provide better cybersecurity. - Investigate Quantum Computing to make the evolution of “Big Data” an effective reality by providing the capability to process the ever-increasing amounts of data being collected, stored, and disseminated, and more quickly ingest, compile, and analyze the large sums of data, perform data mining functions, computing operations, and to process “Big Data”. - Artificial Intelligence/Machine Learning (AI/ML) to automate repetitive tasks, reduce or eliminate inefficiencies in supply chain activities, eliminate the high labor costs for repetitive tasks, reduce the long lead time to process repetitive tasks, implement AI/ML to automate tasks based on the integrity of data, and enhance DLA’s business operations by simply reducing the time needed to perform repetitive tasks – i.e., data entry and transactions. Additional FY 2023 plans include: - Conduct a Sequential Phase II B Small Business Innovative Research (SBIR) Augmented Reality (AR) case study to prove out DLA’s acquisition approach for implementing AR technology in the Warehouse Picking process. Today’s DLA inventory			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** SWM / *Smart-Warehouse Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
management automation system is out of date to meet the increased demand to keep track of current inventory and reduce high inventory adjustments and inventory labor costs. Through the use of improved methods for inventory management, innovative processes are proposed using AR technology. This project will continue to develop a prototype augmented reality system in a DLA warehouse environment and will provide a proof of concept to ascertain the utility, feasibility, maintainability, and cost-effectiveness of using AR to improve inventory efficiency. This project is scheduled for completion in FY24Q2. - Conduct an Outdoor Inventory Management project using RollerBot (AMR) technology to augment the total inventory management of the items stored externally to the Distribution Warehouses which makes it difficult to obtain timely and accurate information such as status of yard inventory. This project is scheduled for completion in FY23Q2. - Collaborate with the Naval Postgraduate School (NPS) in conjunction with the DLA Distribution Center, Norfolk, VA (DDNV) to conduct a Fleet-informed Material Processing Center (MPC) Workload Forecasting project to determine the unpredictable receipting workload for high priority and routine (PRI 1/2/3) Fleet material items at DDNV MPC. The current inability to predict workload creates non-seasonal spikes throughout the year that impact the timely processing of material for delivery to Fleet units at Naval Station Norfolk/Hampton Roads area. ***FY 2024 Plans:*** The Strategic Distribution and Disposition (SDD) program will continue to provide applied research, analytical and decision support to DLA Distribution and Disposition Services and provide support to the Distribution Modernization Program (DMP). SDD will continue to engage with Industry, DOD sponsored FFRDCs and UARCs leveraging subject-matter expertise in key areas of research such as 5G Networks, Sensor Internet of Things (IoT), Blockchain, Quantum Computing, Artificial Intelligence/ Machine Learning (AI/ML), and leverage the benefits realized from proven research studies and pilot projects in the areas of AR, AS/RS, Performance Management, Automated Inventory, 3D Warehouse Mapping, and Autonomous/Robotics systems (e.g., Autonomous Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs), etc.). SDD will continue to incorporate IPTs for project collaboration and Integrated System Engineering concepts (test and evaluation) into Distribution projects. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024: Smart-Warehouse Modernization (SWM) baseline was increased by $1.500 million based on internal funding reallocation decision to modernize DLA's warehousing and distribution processes by leveraging automation, Big Data, and predictive analytics to make data-driven decisions, improve productivity and cost effectiveness, and realize returns on investment as agency savings.			
Accomplishments/Planned Programs Subtotals	-	3.703	5.275

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** SWM / *Smart-Warehouse Modernization*

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 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603720S *I Microelectronics Technology Development and Support (DMEA)*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	1,248.690	202.475	207.333	144.707	-	144.707	147.473	148.370	149.623	152.720	Continuing	Continuing
004: *Defense MicroElectronics Activity (DMEA)*	1,248.690	202.475	207.333	144.707	-	144.707	147.473	148.370	149.623	152.720	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Microelectronics Activity (DMEA) mission is to leverage advanced technologies to provide microelectronics solutions across the entire spectrum of technology development and system acquisition phases. It is critical to National Security for the Department to maintain technological superiority through microelectronics solutions via partnerships with the Defense Industrial Base, and by alternative means when industry is unable or unwilling to provide them. DMEA provides an in-house capability to quickly develop and deliver timely, cost-effective, technically appropriate solutions to sustain weapon systems, to modernize their capabilities, increase their lethality, address new threats, and meet operational demands. DMEA augments its in-house capability through extensive industry and Government partnerships that enable streamlined access to a variety of microelectronics technologies and engineering services to enhance responsiveness, and that develop sources for advanced microelectronics solutions.

DMEA's capabilities are critical in an atmosphere of diminishing domestic semiconductor manufacturing capability and increasing worldwide supply chain risks. The Department has very little influence over the microelectronics industry; the defense market represents less than 0.1% share of the total global semiconductor market. Access to mainstream, State of the Practice (SOTP) and State of the Art (SOTA) technologies is therefore a major and growing challenge. Threats to defense microelectronics include counterfeiting, latent vulnerabilities, malicious insertions, reliability issues particular to military environments, consolidation and off-shoring of manufacturing, rapid obsolescence and diminishing technology availability coming from an unpredictable and unsecured supply chain. In addition, as the Department maintains its weapon systems longer than originally planned, extended use increases demand for sustainment and modernization, which further intensifies the need for DMEA's unique capabilities, as well as continued development, and incorporation, of quantifiable assurance mechanisms.

DMEA provides the Department with engineering expertise and laboratories to address the myriad of microelectronics issues and to meet military requirements across the entire spectrum of technology research and development, acquisition, and long-term support. DMEA applies its specialized capabilities to resolve microelectronics issues for hundreds of distinct Department programs across the acquisition lifecycle every year. In addition, DMEA assists the Combatant Commands (COCOMs) including Special Ops, Cyber, Intelligence, and the Radiation-Hard communities.

DMEA also manages the Trusted Foundry Program which provides the Department with access to SOTA microelectronics design and manufacturing capabilities with the added benefit of Trust when required. This program administers and manages a robust ecosystem of accredited suppliers that meet the Departments requirements for semiconductor assurance. This program provides the Department with the most advanced ASIC technology's available in a Trusted or ITAR assurance level. The program also provides for a Multi-Project Wafer (MPW) program that enables the DoD to transfer research and prototyping into production acquisition programs.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603720S *I Microelectronics Technology Development and Support (DMEA)*

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	160.096	139.833	143.442	-	143.442
Current President's Budget	202.475	207.333	144.707	-	144.707
Total Adjustments	42.379	67.500	1.265	-	1.265
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	49.000	67.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-6.621	-			
• Labor Inflation	-	-	0.671	-	0.671
• Non-Labor Inflation	-	-	0.552	-	0.552
• Program Increase	-	-	0.042	-	0.042

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: 004: *Defense MicroElectronics Activity (DMEA)*		
Congressional Add: *Qualified Discrete Parts*	5.000	-
Congressional Add: *GaN-on-Si RF Front-end*	30.000	-
Congressional Add: *On-Shore Test Site*	9.000	-
Congressional Add: *Silicon Carbide Applications*	5.000	-
Congressional Add: *Functional Transfer from line 101, Trusted and Assured Microelectronics*	-	12.500
Congressional Add: *Advanced node semiconductors*	-	10.000
Congressional Add: *Enhanced RF microelectronics production*	-	35.000
Congressional Add: *Secure advanced on-shore test capability*	-	10.000
Congressional Add Subtotals for Project: 004	49.000	67.500
Congressional Add Totals for all Projects	49.000	67.500

Change Summary Explanation

Program Increase FY 2024: Funds provided for DoD M365 Enterprise Licensing Upgrade of Improved Zero Trust (ZT) Capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / *Microelectronics Technology Development and Support (DMEA)*	Project (Number/Name) 004 / *Defense MicroElectronics Activity (DMEA)*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
004: *Defense MicroElectronics Activity (DMEA)*	1,248.690	202.475	207.333	144.707	-	144.707	147.473	148.370	149.623	152.720	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DMEA maintains an in-house ability to quickly develop and deliver timely, cost-effective, technically appropriate solutions to sustain weapon systems, to modernize their capabilities, increase their lethality, address new threats, and meet operational demands. These funds also support DMEA's ability to partner with industry, other Government agencies, and academia to enable streamlined access to a variety of microelectronics technologies and engineering services.

These funds enable DMEA to provide increasingly rare government microelectronics design, fabrication, and test expertise to DoD programs. DMEA's knowledge of varying military requirements across a broad and diverse range of combatant environments and missions—along with its unique technical perspective—allows it to develop, manage and deliver novel, decisive, quick-turn microelectronics solutions for defense, intelligence, special operations, cyber and combat missions.

These funds allow DMEA to maintain and enhance critical, microelectronics design, aggregation, fabrication, post-processing, assembly, hardware assurance and analysis capabilities to ensure that the Department is provided with solutions that enable or maintain the warfighter's technological superiority over potential adversaries. These solutions use high mix, low volume, unique microelectronics that are endemic to military requirements but are not commercially available. In addition, funding provides for the development and sustainment support necessary to ensure availability of microelectronics technologies in accordance the Department's needs and facilitates the Trusted Supplier Accreditation program required by DoDI 5200.44.

The Department, other US Agencies, and the Intelligence Community require uninterrupted access to semiconductor processes to produce custom integrated circuits designed specifically for military purposes. DMEA, via the Trusted Access Office (TAPO), partners with industry to provide the required solutions, and the necessary access to commercial SOTA microelectronics semiconductor capabilities to meet confidentiality, integrity, availability, performance and delivery needs. If industry cannot or will not provide the required solutions, only then does DMEA provide the necessary solutions using in-house capabilities. A critical element required to enable continued success is DMEA's protection of the industry partners' valuable Intellectual Property (IP). DMEA is an agile, Government-owned-and-operated organization, providing the structure and confidence necessary to assure them that commercial IP is protected from potential competitors. This strategic and cooperative industry partnership approach allows DMEA to use industry-developed IP by acquiring, installing, and applying them toward meeting the immediate and long-term needs of the Department. This unique capability is essential to all major weapon systems, combat operations, and support needs. As such, DMEA serves the Department, other US Agencies, industry and Allied nations.

Programs that DMEA has recently provided critical support to include CH-53E Sea Stallion, Virginia, Class Submarines, Columbia Class Submarines, UH-60 Blackhawk, Air Force Air Combat Command, US Army Corps of Engineers, E-3 AWACS, Military GPS User Equipment, NASA Parker Solar Probe, Naval Research Laboratory High Power Microwave Office, among many others.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603720S / *Microelectronics Technology Development and Support (DMEA)*	**Project (Number/Name)** 004 / *Defense MicroElectronics Activity (DMEA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Defense Microelectronics Activity Accomplishments/Plans	153.475	139.833	144.707
FY 2023 Plans: DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize and sustain aging weapon systems. To meet the increased missions seen in the last several years by CCMDs, Special Operations, and the Intelligence Community, DMEA will extend and refresh capability by recapitalizing and modernizing its aging laboratory infrastructure, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will continue to act as the program manager for the Trusted Foundry Program and will provide the Department with access to state-of-the-art microelectronics semiconductor capabilities with the added benefit of Trust, if necessary, to meet their confidentiality, integrity, availability, performance and delivery needs via the Trusted Access Program Office. The program also provides the Services and other agencies with a competitive cadre of accredited Trusted suppliers that can meet the needs of their mission critical/essential systems for Trusted integrated circuit components. The Trusted Access Program Office has contracted with commercial sources to satisfy state-of-the-art semiconductor requirements. DMEA will foster all viable alternatives to continue the vital supply of Trusted microelectronics, including the work of the DMEA Trusted Access Program Office with commercial state-of-the-art industry. In areas where Trust is not available, DMEA will support the Department in semiconductor assurance pilots and frameworks as needed.			
FY 2024 Plans: DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize and sustain aging weapon systems. To meet the increased missions seen in the last several years by CCMDs, Special Operations, and the Intelligence Community, DMEA will extend and refresh capability by recapitalizing and modernizing its aging laboratory infrastructure, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will continue to act as the program manager for the Trusted Foundry Program and will provide the Department with access to state-of-the-art microelectronics semiconductor capabilities with the added benefit of Trust, if necessary, to meet their confidentiality, integrity, availability, performance and delivery needs via the Trusted Access Program Office. The program also provides the Services and other agencies with a competitive cadre of accredited Trusted suppliers that can meet the needs of their mission critical/essential systems for Trusted integrated circuit components. The Trusted Access Program Office has contracted with commercial sources to satisfy state-of-the-art semiconductor requirements. DMEA will foster all viable alternatives to continue the vital supply of Trusted microelectronics, including the work of the DMEA Trusted Access Program Office with commercial state-of-the-art industry. In areas where Trust is not available, DMEA will support the Department in semiconductor assurance pilots and frameworks as needed.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603720S / *Microelectronics Technology Development and Support (DMEA)*	**Project (Number/Name)** 004 / *Defense MicroElectronics Activity (DMEA)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
No significant changes from FY 2023 to FY 2024.			
Accomplishments/Planned Programs Subtotals	153.475	139.833	144.707

	FY 2022	FY 2023
Congressional Add: Qualified Discrete Parts ***FY 2022 Accomplishments:*** Plans awaiting development.	5.000	-
Congressional Add: GaN-on-Si RF Front-end ***FY 2022 Accomplishments:*** DMEA continued its efforts (phase 3) on scaling and establishing a domestic 200mm Gallium Nitride (GaN) on Silicon (Si) source at a high volume DMEA accredited Trusted Supplier.	30.000	-
Congressional Add: On-Shore Test Site ***FY 2022 Accomplishments:*** DMEA increased existing testing capacity to support the needs of the Department.	9.000	-
Congressional Add: Silicon Carbide Applications ***FY 2022 Accomplishments:*** Awarded a first Phase of an effort to investigate and develop a 200mm SiC (Silicon Carbide) epitaxial growth and manufacturing capability at a domestic 200mm high volume DMEA accredited Trusted Supplier.	5.000	-
Congressional Add: Functional Transfer from line 101, Trusted and Assured Microelectronics ***FY 2023 Plans:*** Funding to be used to supplement the TAPO MPW program.	-	12.500
Congressional Add: Advanced node semiconductors ***FY 2023 Plans:*** DLA is seeking additional clarification on the intent & recipient of the advanced node semiconductors Congressional Add. As clarification is received, a statement detailing execution plans will be provided.	-	10.000
Congressional Add: Enhanced RF microelectronics production ***FY 2023 Plans:*** Continuing TAPO's efforts (phase 4) on scaling and establishing a domestic dual use 200mm Gallium Nitride (GaN) on Silicon (Si) source at a high volume DMEA accredited Trusted Supplier.	-	35.000
Congressional Add: Secure advanced on-shore test capability	-	10.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603720S / *Microelectronics Technology Development and Support (DMEA)*	**Project (Number/Name)** 004 / *Defense MicroElectronics Activity (DMEA)*

	FY 2022	FY 2023
FY 2023 Plans: Augmenting, moving, or increasing capacity to TAPO's existing secure enclave for the use of the Department.		
Congressional Adds Subtotals	49.000	67.500

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605070S *I DOD Enterprise Systems Development and Demonstration*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	33.733	0.654	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing
09: *Enterprise Funds Distribution*	33.733	0.654	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of the DOD Enterprise Business Systems (DEBS) is to coordinate and enable business transformation efforts across the Department of Defense (DOD). DOD's business enterprise must be closer to its warfighting customers than ever before, and Joint military requirements drive the need for greater commonality and integration of business and financial operations.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.654	0.000	0.000	-	0.000
Current President's Budget	0.654	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / *DOD Enterprise Systems Development and Demonstration*	Project (Number/Name) 09 / *Enterprise Funds Distribution*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
09: *Enterprise Funds Distribution*	33.733	0.654	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

Enterprise Funds Distribution (EFD) is a multi-service/multi-agency process improvement and modernization solution, initiated to provide full visibility of the OUSD(C) funds distributed through echelon I and II for the Military Departments, and at all levels for the Defense Agencies. Funds distribution by its nature is a key enabler of financial visibility within DOD enterprise systems. The concept of a fully visible enterprise funds distribution process serves as a reference where planned and coordinated funds development and execution takes place.

Within the current DOD environment, progress has been made streamlining a diverse set of stove-piped budget execution and funds distribution processes and systems. Efforts continue to improve the visibility of funding information, eliminate manual efforts and undue complexities to the management of budget authority, and to eliminate impediments in the flow of funding documents. The current environment relies heavily on manual processing and on disconnected standalone systems for the processing of Funding Authorization Documents (FADs) and reprogramming actions. This environment made the implementation of internal controls difficult, negatively impacted the accuracy and timeliness of information while making the processes of integrating and obtaining management information arduous.

The envisioned operational environment solves these problems by enabling lifecycle program value management in a web-based application utilizing an authoritative database with single-source data entry and automated workflow. Capabilities within this integrated environment will enable the automation of all funds distribution and funds control processes within OUSD(C) using authoritative and highly visible data. Specifically, capabilities include managing apportionments, distributing budget authority to the Military Departments and Defense Agencies, managing rescissions and continuing resolutions, creating and tracking reprogramming actions, and establishing program baselines and budget authority needed to support changes in funding priorities throughout the year.

The operational environment includes organizational elements down to the echelon II level responsible for managing DOD and Component appropriations operating in an unclassified environment. The web-based application provides pre-planning, apportionment, reprogramming, rescission, continuing resolution, reporting of enterprise-level funds control and distribution of appropriated funding.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Enterprise Funds Distribution (EFD)	0.654	0.000	-
Description: EFD will distribute funds to the Military Departments and the Defense Agencies.			
FY 2023 Plans: Funding is no longer required as program was transitioned to DFAS in November 2021.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605070S / *DOD Enterprise Systems Development and Demonstration*	**Project (Number/Name)** 09 / *Enterprise Funds Distribution*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
The decrease from FY 2022 to FY 2023 is due to the program being removed from the RDT&E portfolio.			
Accomplishments/Planned Programs Subtotals	0.654	0.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The EFD strategy is to use a “single acquisition to full capability,” commercial-off-the-shelf (COTS) solution (Momentum software). The effort is needed to ensure EFD is fully implemented for all appropriation funding data for the Military Services and Defense Organizations.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605070S / *DOD Enterprise Systems Development and Demonstration*	**Project (Number/Name)** 09 / *Enterprise Funds Distribution*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Savantage Solutions	Option/ FP	Savantage Solutions : Rockville, MD	14.158	-		-		-		-		-	0.000	14.158	14.158
TeraThink/CGI Corporation	C/FFP	TeraThink Corporation/CGI : Reston, VA	18.083	0.654	Dec 2021	-		-		-		-	Continuing	Continuing	Continuing
TeraThink Corporation	C/FFP	TeraThink Corp. : TeraThink Corporation, Reston, VA	1.492	-		-		-		-		-	0.000	1.492	1.492
Prior Year Contracts	Option/ Various	Multiple : Multiple	-	-		-		-		-		-	Continuing	Continuing	-
		Subtotal	33.733	0.654		-		-		-		-	Continuing	Continuing	N/A

Remarks

Prior year contracts line include Savantage Solutions Option/FP Rockville, MD $14.158 million and TeraThink Corporation FFP Reston, VA $1.492 million.

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	33.733	0.654		-		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605070S / *DOD Enterprise Systems Development and Demonstration*	**Project (Number/Name)** 09 / *Enterprise Funds Distribution*	

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605070S / *DOD Enterprise Systems Development and Demonstration*	**Project (Number/Name)** 09 / *Enterprise Funds Distribution*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Wave 1 Deployment				
Development Activities using Momentum Financials ERP	1	2017	4	2018
Wave 2 Deployment				
The program will continue the development and deployment of EFD post Wave 2 requirements based on user group migration strategy. Also deploy additional accounts and dev activities.	1	2019	4	2019
Wave 3 Deployment				
The program will continue the development and deployment of EFD post Wave 3 requirements based on user group migration strategy. Also deploy additional accounts and dev activities.	1	2020	4	2020
Post Waves 1, 2 and 3 Development				
SCRs, Momentum Upgrade Development, Break-Fix Development	1	2021	4	2021
Transition to DFAS				
Transition to DFAS in November 2021	1	2022	1	2022
Post Transition to DFAS				
Post transition SCRs, Break-Fix Development	1	2022	4	2022

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605080S *I Defense Agencies Initiative (DAI) - Financial System*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	225.964	31.136	23.171	32.629	-	32.629	32.524	32.358	32.798	33.560	Continuing	Continuing
01: *Defense Agencies Initiative - Financial System*	225.964	31.136	23.171	32.629	-	32.629	32.524	32.358	32.798	33.560	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 0491

A. Mission Description and Budget Item Justification

The Defense Agencies Initiative (DAI) program, a Category I Defense Business System, is an Enterprise Resource Planning (ERP) based program that was originally created to solve Defense Agency financial management problems through standard end-to-end business processes delivered by commercial off-the-shelf (COTS) software. DAI's mission is to provide an auditable, Chief Financial Officer (CFO) Act compliant business environment for the Defense customer organizations with accurate, timely, and authoritative financial data. DAI supports continued development and fielding of its current Increment 3 baseline. Previous funding for DAI Increments 1 and 2 were documented in the Defense Enterprise Business Systems program element 50605070S00. Increment 3 will deliver new financial capabilities including Defense Working Capital Fund (DWCF) and Re-Sale accounting plus a major application upgrade.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	32.254	23.171	25.719	-	25.719
Current President's Budget	31.136	23.171	32.629	-	32.629
Total Adjustments	-1.118	0.000	6.910	-	6.910
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.118	-			
• Program Increase	-	-	6.749	-	6.749
• Non-Labor Inflation	-	-	0.161	-	0.161

Change Summary Explanation

Program Increase FY 2024: Migrates DAI to a secure cloud hosting, boot the scale and scope of DAI's infrastructure to support the United States (U.S.) Marine Corps (USMC) and Naval Special Warfare (NSW) system requirements; and provide specialized audit services to DAI customers.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	Project (Number/Name) 01 / *Defense Agencies Initiative - Financial System*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
01: *Defense Agencies Initiative - Financial System*	225.964	31.136	23.171	32.629	-	32.629	32.524	32.358	32.798	33.560	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 0491

A. Mission Description and Budget Item Justification

DAI mission is to deliver an auditable, CFO Act compliant business environment for Defense customer organizations providing accurate, timely, authoritative financial data supporting the DoD goal of standardizing financial management practices, improving financial decision support, and supporting audit readiness. DAI has replaced multiple non-compliant financial management systems supporting diverse operational functions and the warfighter in decision-making and financial reporting. DAI currently provides the capability to produce timely, auditable reports as noted in four consecutive annual unmodified System and Organization Controls report (SOC-1).

The primary goal is to deploy a standardized system solution to improve overall financial management and comply with BEA, Standard Financial Information Structure (SFIS)/Standard Line of Accounting (SLOA), and Office of Federal Financial Management (OFFM) requirements. Common business functions within budget execution include the Department's BEA End to End (E2E) business processes: Cost Management; Budget to Report (B2R); Procure to Pay (P2P) with enhancements facilitating SFIS/SLOA and DoD procurement data standards and direct Treasury disbursing; Acquire to Retire (A2R) (real property lifecycle accounting only); Hire to Retire (H2R) (Time and Labor reporting and absence management only); Order to Cash (O2C); Proposal to Reward (P2R) (Grants financial management and accounting only; and a phased implementation of Governance, Risk, and Compliance (GCR) capabilities supporting audit readiness). Future Defense Working Capital Fund accounting, and Re-Sale Accounting (for Defense Commissary Agency (DeCA).

The DAI program modernizes the Defense Agencies' financial management processes by streamlining financial management capabilities, addressing financial reporting material weaknesses, and supporting financial statement auditability for the majority of agencies, field activities and non-Service organizations across the DoD. DAI supports a transformation of budget, finance, and accounting processes across participating defense agencies to help improve the quality of financial information, supporting financial auditability and decision-making. The DAI business solution, once fully implemented, will provide a near real-time, web-based system from a ".mil" environment of integrated business processes that will enable in excess of 84,000 Defense Agency financial managers, program managers, auditors, and Defense Finance and Accounting Service (DFAS) representatives to make sound financial business decisions.

The DAI implementation approach deploys a standardized system solution that is consistent with requirements in the Federal Financial Management Improvement Act (FFMIA) and the DoD Business Enterprise Architecture (BEA), while leveraging the out-of-the-box capabilities of the selected Commercial-Off-the-Shelf (COTS) product, Oracle e-Business Suite (EBS), Release 12.2.8 (R12). DAI implemented an Oracle Office of Management and Budget Financial Systems Integration Office (FSIO) qualified COTS financial management business solution with common business processes and data standards. The Program Management Office (PMO) will not develop any objects that are included in core COTS software or services (i.e. vendor data from Federal authoritative sources).

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

DAI supports the FY22-26 Department of Defense Financial Management Strategy. Strategic Goal 2, Optimize taxpayer dollars for the highest value outcomes; Strategic Goal 3, Increases the integrity of financial results; Strategic Goal 4, Simplify and optimize our end-to-end business environment; and Strategic Goal 5, Empower data-driven, fiscally informed decision making.

DAI is currently implemented at 26 Defense organizations and the Office of the Under Secretary of Defense, Comptroller (OUSD(C)). The program office is also responsible for operational sustainment of the system. Funds are required for additional government and contractor support, licenses, maintenance, and hardware to accomplish the remaining capability developments and organizational implementations. From 2017- 2022 DAI received unmodified audit opinions with no comments.

The benefits of DAI are:
• Labor efficiencies (entering data once) and shared across all business processes (modules), workflows and lifecycle in a modern system;
• Reduction in contractor support;
• Financial visibility (Access to real-time financial data transactions);
• Enabling agility and resilience in execution (No silos – anyone/anywhere can backfill and work continues);
• Retiring legacy systems;
• Shared common business processes and employment of Federal/DoD Enterprise data standards (i.e., SFIS, SLOA, Procurement Data Standard (PDS) and Procurement Request Data Standard (PRDS)); and
United States Standard General Ledger (USSGL) Chart of Accounts to resolve DoD material weaknesses and deficiencies.
• Reducing reliance on custom Reports, Interfaces, Conversions, Extensions, Forms and Workflows by leveraging application upgrades
• Enhanced Internal controls to ensure accurate data, regulatory compliance and ensuring segregation of duties
• Significantly reduced data reconciliation requirements; and
• Enhanced analysis and decision support capabilities.

The DAI PMO also provides system integration services that include: acquisition/financial management, project management; configuration management; developing required Reports, Interfaces, Conversions, Extensions, Forms and Workflows (RICE-FW) objects; testing (cyber security, integration, functional, performance, conversion, user acceptance, operational); training (train the trainer/change management preparing the users for the cross functional skills and awareness needed to perform well with an integrated enterprise resource planning system); system deployment; data conversion; information assurance; database administration; as well as studies, coordination/analysis support.

DLA Acquisition (J7) serves as the DAI Milestone Decision Authority (MDA), and DLA Information Operations (J6) provides the Program Executive Officer (PEO), program manager, and PMO staff. The DAI PMO relies on J7 for most contracting support. Defense Information Systems Agency (DISA) data centers provide production, test and development, as well as Continuity of Operations (COOP) hosting, and the Joint Interoperability Test Command (JITC) provides interoperability and performance testing. The DAI PMO serves as systems integrator.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Defense Agencies Initiative (DAI) - Financial System	31.136	23.171	32.629

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Description: In FY 2022, the DAI PMO accomplished: • Deployed in 29 organizations at over 4,500 locations worldwide, including 117K personnel and over 90K active users. • Six consecutive Unmodified Opinions for the FY22 DAI Statement on Standards for Attestation Engagements (SSAE) 18 Audit from auditors Ernst and Young at the FY22 DLA SSAE-18 Exit Conference (best outcome). • Deployment of Release 4 to over 72K current users on 11 October. • Deploying full financial capability to the United States Marine Corps (USMC) on 8 November. • Development of necessary work instructions and training materials. • Supporting the DoD RMF process to support actions included in the Authorizing Official's (AO) required Plan of Actions and Milestones including an independent FISCAM Test of Design/Test of Effectiveness to result in an AO decision to award an Authority to Operate. • Continued maturity the GRC capabilities by expanding Enterprise controls: Configuration, Access, Prevention & Transactions supporting audit findings, recommendations & CAPs. • Maintaining technical operations including: application of DISA Security Technical Implementation Guides, hardware & software currency for servers operating systems, middleware & applications including patches; overseeing internal processes within the Data Center enclaves; & the daily operation of several interfaces with external systems leveraging DLA Defense Automated Addressing System (DAAS), as well as established Federal Enterprise system web services. • Obtaining an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid. • Conducting regular adversarial assessments, Risk Management Framework (RMF) continuous monitoring including code scans, and a Cooperative Vulnerability and Penetration Assessment. • Transition to the Cloud Hosting: On 9 Dec 2021 the DAI Functional Sponsor, OUSD(C) signed a decision memo directing the migration of DAI hosting from DISA Data Centers to a commercial cloud hosting solution by October 2023. This migration is expected to increase scalability of DAI for future customer expansion and improve system performance. • The DAI PMO partnering with the Office of Under Secretary of Defense (OUSD), Comptroller's Robotic Process Automation (RPA) Team, and DAI user organizations to develop automations for many routine financial management entries - reducing clicks and process deviations among users. These automations have increased data quality and decreased process errors, thereby increasing DAI's auditability, reducing the number of Help Desk tickets received, and freeing DAI PMO sustainment resources to work on higher-value tasks. • Developing Twenty-two (22) additional attended and unattended automations that are currently in development or User Acceptance Testing.			
FY 2023 Plans: In FY 2023, DAI PMO will: • Deploy Release 5 to the existing customer organization, along with DFAS and NSWC.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
• Develop Release 6 to deploy to customer organizations in Oct 2023. • Conduct pre-deployment planning and BPR, Inc 3 Rel 6 Organization mocks and SE technical reviews. • Support 29 organizations as they undergo audit by helping them with answering auditor RFIs and helping them locate required artifacts to maintain consistency of approach with all that use DAI. • Maintain Application User Licenses to support additional users and increased data storage costs based on application data growth. • Conduct a service provider, independent audit, SSAE-18, and support DLA Audit Readiness Office in developing an assertion package supporting DLA SOC 1 and resolve any identified NFRs. • have DISA data centers maintain all the operations software and hardware in the suite. DAI PMO will use data centers' SSAE 18 SOC 1 Report as the basis for its input for the annual DLA SOC 1 Report. Support development of some cloud hosting activities in preparation for migration. • Conduct BEA compliance assessment against the current version (v11.2 for compliance) document results in the Department's assessment portal and conduct BPR for newly joining agencies. • Resolve critical software errors and critical statutory/regulatory enhancements that affect operations and incorporate changes identified during BPR, BEA compliance assessment and the Audit generated corrective action plans. • Support RMF process maintaining activity to support actions included in the AO's required POA&M to maintain the ATO. • Expand the use of RPA scripts to increase speed of data entry, ensuring data accuracy from data entry through the entire requisition life cycle. • Continue on-going efforts to support departmental efforts for ICAM access control intuitive. • Support the OSD Initiatives including MyTravel and G-Invoicing. ***FY 2024 Plans:*** During FY 2024, DAI will transition the application from an on-premise DISA hosted environment to a commercial cloud hosting environment which will provide improved system performance and enable cost-effective scalability to respond to future potential customer growth. For FY 2024 and beyond DAI will also continue to develop and deploy Departmental initiatives to include G-Invoicing, MyTravel Implementation, Travel Payment Gateway, and Identity Credential Access Management (ICAM). ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase from FY 2023 to FY 2024 is due to DAI Cloud Hosting Migration implementation. Additional funds were received for system development and deployment support in the following areas: major development, new interfaces, requirements management, configuration management, new user training, and performance testing.			
Accomplishments/Planned Programs Subtotals	31.136	23.171	32.629

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

DAI is developed and implemented using an evolutionary/incremental strategy including major annual software releases to accommodate upgrades as required by changes to the Department's BEA including new laws, regulations and policies as governed by its Functional Sponsor.

DAI Increments 1 and 2 are in sustainment. When Increment 3, Release 1 went live in October 2018, it subsumed Increment 2; therefore, only one DAI production baseline exists at any point in time.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAI Application Development Support Services	C/CPFF	Application Development support to DAI : Virginia	-	19.876	Mar 2022	18.474	Mar 2023	27.629	Mar 2024	-		27.629	Continuing	Continuing	-
Requirements Management (RM) Support	MIPR	DISA : Fort Meade, MD	1.790	0.378	Oct 2021	0.389	Oct 2023	-		-		-	Continuing	Continuing	Continuing
DCPDS/DAI Interface File Changes	MIPR	DLA Finance : Fort Belvoir, VA	0.053	0.193	Feb 2022	-		-		-		-	Continuing	Continuing	Continuing
Prior Year Contracts	Option/ Various	MULTI : MULTI	192.275	0.000		-		-		-		-	-	-	N/A
		Subtotal	194.118	20.447		18.863		27.629		-		27.629	Continuing	Continuing	N/A

Remarks

Prior Year Contracts include: Global Model Infrastructure C/FFP CACI: Chantilly, VA $20.594 million; Global Model Implementation C/FFP CACI: Chantilly, VA $39.580 million; Global Model Compliance C/FFP CACI: Chantilly, VA $41.422 million; Global Model P2P C/FFP IBM: Bethesda, MD $32.018 million; Global Model A2R C/CPFF CACI Inc Federal: Chantilly, VA $18.845 million; DAI Data Conversion Support Option/FFP Terathink: Reston, VA $2.857 million; Oracle Time & Labor Software License and Maintenance C/FP Mythics, Inc: Virginia Beach, VA $1.020 million; Global Model CAD C/CPFF CSC: Falls Church, VA $3.205 million; Jaws Professional Licenses C/FFP Immix: McLean, VA $0.017 million; Oracle Advanced Compression Licenses $1.622 million; Oracle Contract Lifecycle Management Licenses C/FFP Mythics Inc: Virginia Beach, VA $7.408 million; Oracle Licenses MIPR DISA: Pensacola, FL $5.446 million; Kurzweil 5000 508 Assistive Tech Licenses C/FFP Envision Technology Inc: Bethesda, MD $0.008 million; Dragon Naturally Speaking 508 C/FFP Red River Computer Co: Claremont, NH $0.007 million; DISA/DITCO Delinquent Balance MIPR DISA DITCO: Scott AFB, IL $0.017 million; and DBTA Section 1553 MIPR DFAS: Columbus, OH $0.377 million.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Estimated SBIR/STTR:	TBD	TBD : TBD	4.365	1.118	Jun 2022	0.817	Jun 2023	-		-		-	Continuing	Continuing	Continuing
		Subtotal	4.365	1.118		0.817		-		-		-	Continuing	Continuing	N/A

Remarks

SIBR/SITTR Tax is taken off the topline

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DISA Hosting: Test and Development	MIPR	DISA : Pensacola, FL	18.077	6.773	Oct 2021	3.000	Oct 2022	4.000	Oct 2023	-		4.000	Continuing	Continuing	Continuing
Interoperability	MIPR	JITC : Fort Meade, MD	4.400	1.226	Oct 2021	0.079	Oct 2022	0.200	Oct 2023	-		0.200	Continuing	Continuing	Continuing
Performance and Regression Testing	MIPR	JITC : Fort Huachuca, AZ	4.580	1.422	Oct 2021	0.412	Oct 2022	0.800	Oct 2023	-		0.800	Continuing	Continuing	Continuing
DCPS Testing	MIPR	DFAS : Indianapolis, IN	0.424	0.150	Oct 2021	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	27.481	9.571		3.491		5.000		-		5.000	Continuing	Continuing	N/A

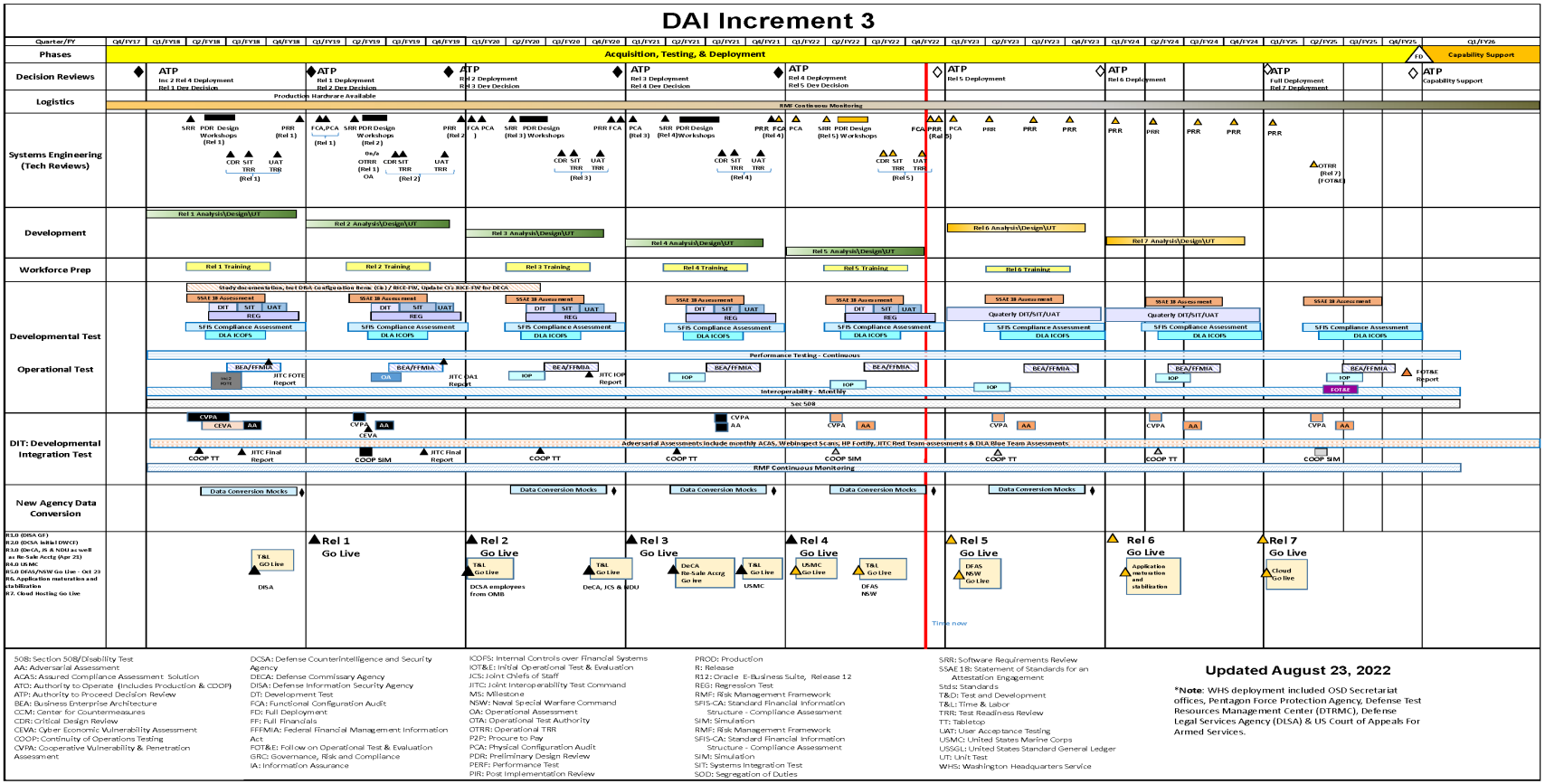
Remarks

Previous MIPR actions: Operational Test and Evaluation, $4.742

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	225.964	31.136		23.171		32.629		-		32.629	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*



508: Section 508/Disability Test
AA: Adversarial Assessment
ACAS: Assured Compliance Assessment Solution
ATO: Authority to Operate (Includes Production & CDOP)
ATP: Authority to Proceed Decision Review
BEA: Business Enterprise Architecture
CCM: Center for Countermeasures
CDR: Critical Design Review
CEVA: Cyber Economic Vulnerability Assessment
COOP: Continuity of Operations Testing
CVPA: Cooperative Vulnerability & Penetration Assessment
DCSA: Defense Counterintelligence and Security Agency
DECA: Defense Commissary Agency
DISA: Defense Information Security Agency
DT: Development Test
FCA: Functional Configuration Audit
FD: Full Deployment
FF: Full Financials
FFMIA: Federal Financial Management Information Act
FOT&E: Follow on Operational Test & Evaluation
GRC: Governance, Risk and Compliance
IA: Information Assurance
ICOFS: Internal Controls over Financial Systems
IOT&E: Initial Operational Test & Evaluation
JCS: Joint Chiefs of Staff
JITC: Joint Interoperability Test Command
MS: Milestone
NSW: Naval Special Warfare Command
OA: Operational Assessment
OTA: Operational Test Authority
OTRR: Operational TRR
P2P: Procure to Pay
PCA: Physical Configuration Audit
PDR: Preliminary Design Review
PERF: Performance Test
PIR: Post Implementation Review
PROD: Production
R: Release
R12: Oracle E-Business Suite, Release 12
REG: Regression Test
RMF: Risk Management Framework
SFIS-CA: Standard Financial Information Structure - Compliance Assessment
SIM: Simulation
RMF: Risk Management Framework
SFIS-CA: Standard Financial Information Structure - Compliance Assessment
SIM: Simulation
SIT: Systems Integration Test
SOD: Segregation of Duties
SRR: Software Requirements Review
SSAE 18: Statement of Standards for an Attestation Engagement
Stds: Standards
T&D: Test and Development
T&L: Time & Labor
TRR: Test Readiness Review
TT: Tabletop
UAT: User Acceptance Testing
USMC: United States Marine Corps
USSGL: United States Standard General Ledger
UT: Unit Test
WHS: Washington Headquarters Service

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605080S / *Defense Agencies Initiative (DAI) - Financial System*	**Project (Number/Name)** 01 / *Defense Agencies Initiative - Financial System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Defense Agencies Initiative (DAI)				
DAI - - See schedule exhibit for more details	1	2018	4	2025

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605502S / *Small Business Innovative Research (SBIR)*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	68.353	11.500	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing
01: *Small Business Innovative Research*	68.353	11.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Logistics Agency's (DLA's) ability to deliver Americans the right logistics solution in every transaction requires more than successful management of the Agency's wholesale supplies and suppliers. It requires supply chain excellence. Our military's ability to generate and sustain combat readiness indefinitely, anywhere on the globe requires that DLA-managed materiel flow seamlessly and as needed from the nation's industrial base to where it is ultimately used.

DLA's Small Business Innovative Research (SBIR) program seeks to solicit innovative research and development proposals from the small business community to address DLA's strategic and operational requirements. All selections shall demonstrate and involve some technical risk with yet to be determined technical feasibility. Phase I proposals should demonstrate the feasibility of the proposed technology and provide a strong business case for Phase II investment for a prototype or at least a proof-of-concept demonstration. A favorable return on investment and commercialization potential have a strong influence on Phase II selections.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	11.500	0.000	0.000	-	0.000
Current President's Budget	11.500	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

FY 2022:

Defense Logistics Agency (DLA) SBIR/STTR taxes were $4.879 million and Defense Microelectronics Agency (DMEA) taxes were $6.621 million.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502S / *Small Business Innovative Research (SBIR)*	Project (Number/Name) 01 / *Small Business Innovative Research*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
01: *Small Business Innovative Research*	68.353	11.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Small Business Innovation Program (SBIP) explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies with a defense application as well as a commercial value. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future DLA operational and sustainment requirements. DLA strives to make it fast and easy for customers to work with our Agency by quickly understanding current requirements and anticipating their future needs. In support of the major subordinate commands and military Services, Small Business Innovation Research (SBIR) helps to ensure readiness and lethality across the end-to-end supply chain by optimizing retail and industrial support, which ultimately reduces risk and increases efficiency, and positions solutions for Warfighter requirements.

Dual-use means the technologies will be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new DLA technologies, and as a route to national economic growth through new commercial products. DLA will conduct the competition as well as award and manage the contracts.

The DLA's SBIR/STTR investments are divided into multiple Research Areas that are aligned with the National Defense Strategy and the DLA Strategic Plan.

DLA R&D SBIP Strategic Focus Areas
- Nuclear Enterprise Support: To maintain nuclear weapons systems readiness, SBIP seeks to qualify alternate sources of supply through the reverse engineering of technical data and/or source approval processes to improve availability for consumable parts for weapons systems with limited or diminishing sources of supply.
- Force Readiness and Lethality: To improve life cycle performance through technological advancement, innovation and reengineering, SBIP strives to mitigate single points-of-failure that threaten the readiness of weapons systems used by our Warfighters.
- Supply Chain Innovation: To maintain a secure and resilient supply chain, SBIP provides opportunities for our small business industrial base to engage in technological innovations that enhance supply chain operations, improve procurement lead times, and reduce life cycle costs.
- Supply Chain Assurance: To ensure supply chain readiness, SBIP endeavors to secure the microelectronics supply chain, adopt industrial base best practices associated with counterfeit risk reduction, and develop a domestic supply of rare earth elements essential to maintain the integrity of DLA’s complex supply chain.

DMEA
- Advanced microelectronics concepts, technologies, and applications
- Continue to seek innovative technical solutions to DOD microelectronics research and development needs and increase private sector commercialization of these innovations.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 6	**R-1 Program Element (Number/Name)** PE 0605502S / *Small Business Innovative Research (SBIR)*	**Project (Number/Name)** 01 / *Small Business Innovative Research*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: SBIR Accomplishments/Plans	11.500	0.000	-

Description: DLA FY 2022 SBIR/STTR Accomplishments:
- Grew Small Business capability to combat repair part sourcing challenges associated with weapon system aging, obsolescence, and DMSMS through innovation, reverse engineering, and advanced manufacturing techniques
- Developed domestic suppliers for critical REEs, and derived materials and parts, such as magnets. Successfully developed recycling technologies for rare earth elements/magnets and qualified products for a drop-in replacement for high performance weapons systems (i.e. F-35s/F-16s, JDAMs, turbine engines for various fighter jets, etc.)
- Sponsored innovative manufacturing technologies to enhance supply chain operation and improve weapon system lifecycle performance (i.e. Fuel Cells, A/C Canopy Seals, Braking Systems, etc.)
- Developed Additive Manufacturing process monitoring and control system for Laser Powder Bed Fusion and Directed Energy Deposition methods - Transition system to OEMs, Army ARL, Air Force, NASA and other research institutions.

DMEA FY 2022 SBIR Accomplishments - The SBIR Program contributed to the advancement of microelectronics concepts, technologies, and applications through the following topics initiated in FY 2022:
• Synthesizable Register Transfer Logic (RTL) Assertions
• Ultra High Voltage Silicon Carbide (SiC) Gated Devices (D2P2)

FY 2023 Plans:
DLA SBIR/STTR:
Continue execution of all active Phase I and Phase II SBIR/STTR Projects. Work with other R&D Programs and other divisions with DLA to identify requirements that meet DLA's long and short term Strategic Objectives. Provide adequate guidance and mentorship to Phase II to projects to increase the likelihood of transition into government programs of record or commercial ventures. Issue Phase III contracts.

DMEA SBIR:
Continue to seek innovative technical solutions to DoD microelectronics research and development needs and increase private sector commercialization of these innovations.

Emerging results from these FY 2023 SBIR efforts will be reported in FY 2024:

• Automated Measurement of Passive Devices in Printed Circuit Assemblies
• High Voltage Package Encapsulation using Innovative and Advanced Materials
• High-G Accelerometers

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 6	**R-1 Program Element (Number/Name)** PE 0605502S / *Small Business Innovative Research (SBIR)*	**Project (Number/Name)** 01 / *Small Business Innovative Research*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
• High-G Clock Source • Low Cost High Power Opening and Closing Switches (D2P2) • Modular Cryogenic Dewar for Radiation Testing • SiC Stress Tuning • Ultra-High Voltage Insulated Gate Bipolar Transistor on SiC (D2P2) • Ultra Wideband Voltage Controlled Oscillator • Vertical Photoconductive Semiconductor Switch (PCSS) & Triggering Assembly • Radiation Shielding (Sequential Phase II) ***FY 2023 to FY 2024 Increase/Decrease Statement:*** SBIR and STTR tax amounts are based on enacted budgets.			
Accomplishments/Planned Programs Subtotals	11.500	0.000	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

The SBIR acquisition process seeks to match projects with DLA's Strategic Focus Areas. The goal is to align SBIR/STTR developed technology with current and future DLA requirements. DLA solicits all new project execution work through the DOD SBIR Broad Agency Announcement (BAA). There are three separate solicitation periods throughout each year. (Jan-Feb, May-Jun, and Sep-Oct)

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0708012S / *Pacific Disaster Center*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	14.328	5.733	11.875	1.905	-	1.905	1.896	1.906	1.922	1.962	Continuing	Continuing
03: *Pacific Disaster Center*	14.328	5.733	11.875	1.905	-	1.905	1.896	1.906	1.922	1.962	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Pacific Disaster Center (PDC) is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the Office of the Under Secretary of Defense (Acquisition and Sustainment) (OUSD(A&S)) and the Defense Logistics Agency (DLA). The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC develops new and innovative technologies to operate an (unclassified) integrated multi-hazard monitoring, early warning and decision support system, called DoD RAPIDS, for the Department.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	1.799	1.875	1.896	-	1.896
Current President's Budget	5.733	11.875	1.905	-	1.905
Total Adjustments	3.934	10.000	0.009	-	0.009
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	4.000	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.066	-			
• Non-labor Inflation	-	-	0.009	-	0.009

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: 03: *Pacific Disaster Center*		
Congressional Add: *Global Water Security Center*	4.000	10.000
Congressional Add Subtotals for Project: 03	4.000	10.000
Congressional Add Totals for all Projects	4.000	10.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / *Pacific Disaster Center*	Project (Number/Name) 03 / *Pacific Disaster Center*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
03: *Pacific Disaster Center*	14.328	5.733	11.875	1.905	-	1.905	1.896	1.906	1.922	1.962	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The PDC has provided operational support for an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department since 2007. The system, covering global hazard is frequently used by COCOMS, particularly INDOPACOM and SOUTHCOM, for HA/DR missions and exercises, and was recently selected as one of the most effective systems in a position paper by the department, reviewing all unclassified information sharing systems. “Expanded use of RAPIDS across the DoD at the Combatant Commands, Joint Task Force, and by deployed units from the services” was identified as ”a primary Joint Staff objective” in a memorandum dated July 6, 2017. RAPIDS is also regularly used at the National Guard Bureau Joint Operations Center for monitoring events and crises of interest.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Pacific Disaster Center (PDC)	1.733	1.875	1.905

Description: The Under Secretary of Defense for Acquisition and Sustainment, (USD(A&S)), is the Operational Sponsor and functional Office of Secretary of Defense (OSD) Principal Staff Assistant (PSA) for the program. USD(A&S) will continue to provide acquisition oversight authority for the program.

The PDC has been in operation since February 1996, as a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. Pacific Disaster Center (PDC) functions, manpower, and budget resources transferred to the OUSD (A&S) and the Defense Logistics Agency (DLA) in October 2011.

The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC’s applications and information products enhance preparedness, situational awareness, and civil-military communications for humanitarian missions worldwide, while its national-level socio-economic Risk and Vulnerability Assessments help inform strategies by measuring indicators for national resiliency using scientific methods. The DLA J35, Plans Executive Directorate oversees program management responsibilities related to the PDC. The Program Manager's primary responsibility is for management and stewardship of governmental funds provided in Defense Department appropriations for DoD missions associated with DoD CrM, HA/DR, Theater Security Cooperation, and Defense Support to Civil Authorities (DSCA). In doing this, the Program Management Office develops and provides policy, oversight and guidance, and jointly develops strategic guidelines, programmatic content and priorities with the UH and PDC. The PDC Program Office also serves as a support element of the Hawaii-based organization especially in the area of gaining Federal agency support and resources, as well as business opportunities.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708012S / *Pacific Disaster Center*	**Project (Number/Name)** 03 / *Pacific Disaster Center*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
In 2022, the Pacific Disaster Center was recognized as the winner of the United Nations Sasakawa Award for its global efforts related to disaster risk reduction. ***FY 2023 Plans:*** The FY 2023 Annual Plan was published and presented during the Program Management Review in December 2022. Program efforts are to continue modernization and sustainment of the DisasterAWARE system to support the DoD's Risk Assessment, Planning and Incidents Decision support (RAPIDS) as well as Emergency Management Operations (EMOPS) (supporting the Department's and it's partner's Humanitarian assistance and Disaster Recovery (HA/DR) and Defense Support of Civil Authorities (DSCA) missions. ***FY 2024 Plans:*** FY 2024 Annual Plan will be developed and presented during the Program Management Review in December 2023. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Congressional add of $10 million was provided in FY 2023 for global water security center.			
Accomplishments/Planned Programs Subtotals	1.733	1.875	1.905

	FY 2022	FY 2023
Congressional Add: Global Water Security Center	4.000	10.000
FY 2022 Accomplishments: The Global Water Security Center (GWSC) was approved by The University of Alabama's Board of Trustees in June 2021 under the auspices of the University of Alabama's Alabama Water Institute (AWI). Through ground-breaking research and analysis, operationalizing applied science, and developing and implementing best practices in risk communications, GWSC will create the most reliable water and environmental security-related information, tools, and analysis. By communicating to key U.S. decision-makers in contextually appropriate ways, GWSC will aid U.S. water security interests and improve outcomes like water access, food security, economic opportunities, and health. The center's key stakeholders could include: DoD, Intelligence Community, State Department, Coast Guard, USGS, NOAA, FEMA, Red Cross, USAID, and many other academia and private stakeholders. The Global Water Security Center's objectives include: 1) Advancing water and environmental security science by facilitating research through collaborative partnerships with academia, government, and industry. 2) Develop and maintain water and environmental security information and data that are consistent, up-to-date, and reliable. This will improve engagement with partners while encouraging them to integrate the information into key national security work.		

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708012S / *Pacific Disaster Center*	**Project (Number/Name)** 03 / *Pacific Disaster Center*

	FY 2022	FY 2023
3) Advance water and environmental security science by facilitating research through collaborative partnerships with academia, government, and industry. ***FY 2023 Plans:*** The Global Water Security Center (GWSC) will to deliver data, information, knowledge, and training to help key decision makers understand the connection between water security and national security and to leverage that knowledge to achieve their missions. Through modeling for Water and Climate Security Impacts, the GWSC will support science applications and analysis of environmental (in)security within the water, food, energy, and health nexus. In addition, the GWSC will support diverse organizations like CCMDs, OSD, Joint Staff, and military services anticipate the data and products can be force multipliers.		
Congressional Adds Subtotals	4.000	10.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

PDC projects beyond the baseline Situational Awareness & Decision Support Applications/Tools architecture (Atlas/DisasterAWARE Pro/RAPIDS) undertaken in support of the DoD Cooperative Agreement (CA) with the University of Hawaii (UH) are from PDC customers (e.g., DoD, NGOs, other nations, academia, and industry). The PDC prepares the public, disaster managers, governments, and others to mitigate the effects of disasters. The goal is to have people and technology work together to preserve life, safeguard livelihoods, protect property to foster disaster-resilient communities. Projects obtained and funded from this customer base serve as a means to determine PDC product and services relevancy. PDC's expanded risk assessments to include scientific measure of Fragility profiles and Women, Peace, and Security (WPS) are received by DoD and other national policy makers as a base to inform the strategic decision-making process.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / *Pacific Disaster Center*	Project (Number/Name) 03 / *Pacific Disaster Center*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PDC Disaster AWARE: Early Warning and Decision Support Applications	MIPR	University of Hawaii Systems : Honolulu, HI	14.328	1.733	Dec 2021	1.875	Dec 2022	1.905	Dec 2023	-		1.905	Continuing	Continuing	Continuing
Global Water Security Center	MIPR	University of Alabama through the University of Hawaii : Honolulu, HI	-	4.000	Aug 2022	10.000	Apr 2023	-		-		-	Continuing	Continuing	-
		Subtotal	14.328	5.733		11.875		1.905		-		1.905	Continuing	Continuing	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.328	5.733		11.875		1.905		-		1.905	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708012S / *Pacific Disaster Center*	**Project (Number/Name)** 03 / *Pacific Disaster Center*

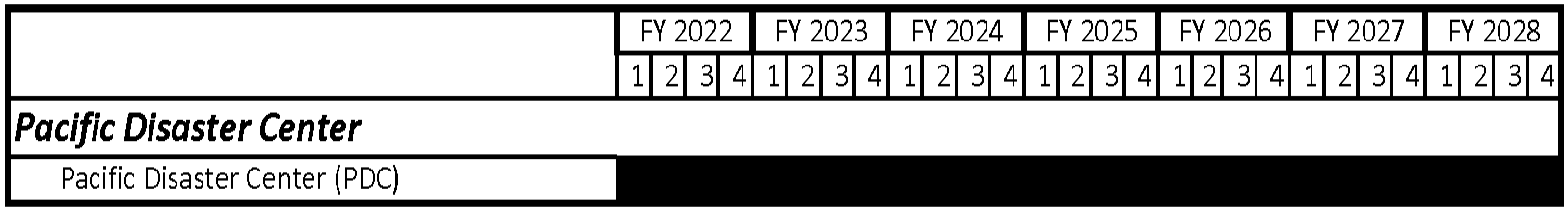


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708012S / *Pacific Disaster Center*	**Project (Number/Name)** 03 / *Pacific Disaster Center*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Pacific Disaster Center				
Pacific Disaster Center	1	2022	4	2028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Logistics Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0708047S *I Defense Property Accountability System (DPAS)*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	17.210	6.157	3.264	3.249	-	3.249	3.062	3.080	3.106	3.172	Continuing	Continuing
ABC: *DPAS*	17.210	6.157	3.264	3.249	-	3.249	3.062	3.080	3.106	3.172	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Property Accountability System (DPAS) provides the Department an asset accountability system which is fully compliant with financial reporting regulations and has a clean audit history. With an integrated accountability, utilization, maintenance, and warehouse capability, DPAS provides the Department an enterprise solution for asset management.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	6.390	3.264	3.233	-	3.233
Current President's Budget	6.157	3.264	3.249	-	3.249
Total Adjustments	-0.233	0.000	0.016	-	0.016
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.233	-			
• Non-Labor Inflation	-	-	0.016	-	0.016

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708047S / *Defense Property Account ability System (DPAS)*	Project (Number/Name) ABC / *DPAS*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
ABC: *DPAS*	17.210	6.157	3.264	3.249	-	3.249	3.062	3.080	3.106	3.172	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DPAS system provides accountability and management functionality of General Equipment, Real Property and Internal Use Software, to the Department. The budgeted projects will provide enhancements to the existing capability, ensure efficient operation, and provide solutions for process gaps as they are discovered. The greater enhancements to DPAS allow the DOD to sunset legacy systems as DPAS assimilates the legacy functionality into the overall operations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Technical Refresh	6.157	3.264	3.249

Description: During the Technical Refresh, changes to the system processes will be made so accounting transactions for equipment assets from the warehouse portion of the system will mirror the processes in the current Property Accountability. The processes to support the Army to field assets from the Program Executive Offices to their field units will also be in this version.

FY 2022 Accomplishments:
In December 2021, DPAS completed the installation of a software release. This package contained functionality to provide a total asset feed to the OSD ADVANA platform, providing OSD and the DPAS user community a view of all assets on DPAS. The package also provides a seamless transfer capability of assets between the Property Accountability, Maintenance and Warehousing modules, providing the capability to move an asset into and out of storage or maintenance without losing accountability/visibility. The technical refresh of the overall DPAS software continued with the release of additional processes under the upgraded code platform.

FY 2023 Plans:
Continue the technical refresh which includes: improve functionality, increase scalability, upgrade processes, decrease sustainment costs, and improve user experience.

FY 2024 Plans:
Complete the technical refresh which includes: improve functionality, increase scalability, upgrade processes, decrease sustainment costs, and improve user experience and incorporate over 600 System Change Requests (SCRs) that have been submitted by various DoD components.

FY 2023 to FY 2024 Increase/Decrease Statement:

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708047S / *Defense Property Accountability System (DPAS)*	**Project (Number/Name)** ABC / *DPAS*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
No significant change from FY 2023 to FY 2024.			
Accomplishments/Planned Programs Subtotals	6.157	3.264	3.249

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708047S / *Defense Property Account ability System (DPAS)*	**Project (Number/Name)** ABC / *DPAS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DPAS Version 7 Development	C/CPIF	Leidos Inc : Camp Hill PA	6.631	-		-		-		-		-	0.000	6.631	6.631
DPAS Development 2020.1	C/FFP	Leidos Inc : Camp Hill PA	3.545	-		-		-		-		-	0.000	3.545	3.545
DPAS Development Version 2021.1	SS/FFP	Leidos, Inc. : Camp Hill Pa	7.034	-		-		-		-		-	Continuing	Continuing	7.301
DPAS Development Version 2022.1	Option/ FFP	Leidos Inc: : Camp Hill, PA	-	6.157	Aug 2022	-		-		-		-	Continuing	Continuing	6.390
DPAS Development 2023.1	Option/ FFP	Leidos Inc : Camp Hill, PA	-	-		3.264	Aug 2023	-		-		-	Continuing	Continuing	-
DPAS Development Version 2024.1	C/FFP	TBD : TBD	-	-		-		3.249	Sep 2023	-		3.249	Continuing	Continuing	3.233
		Subtotal	17.210	6.157		3.264		3.249		-		3.249	Continuing	Continuing	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.210	6.157		3.264		3.249		-		3.249	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708047S / *Defense Property Account ability System (DPAS)*	**Project (Number/Name)** ABC / *DPAS*

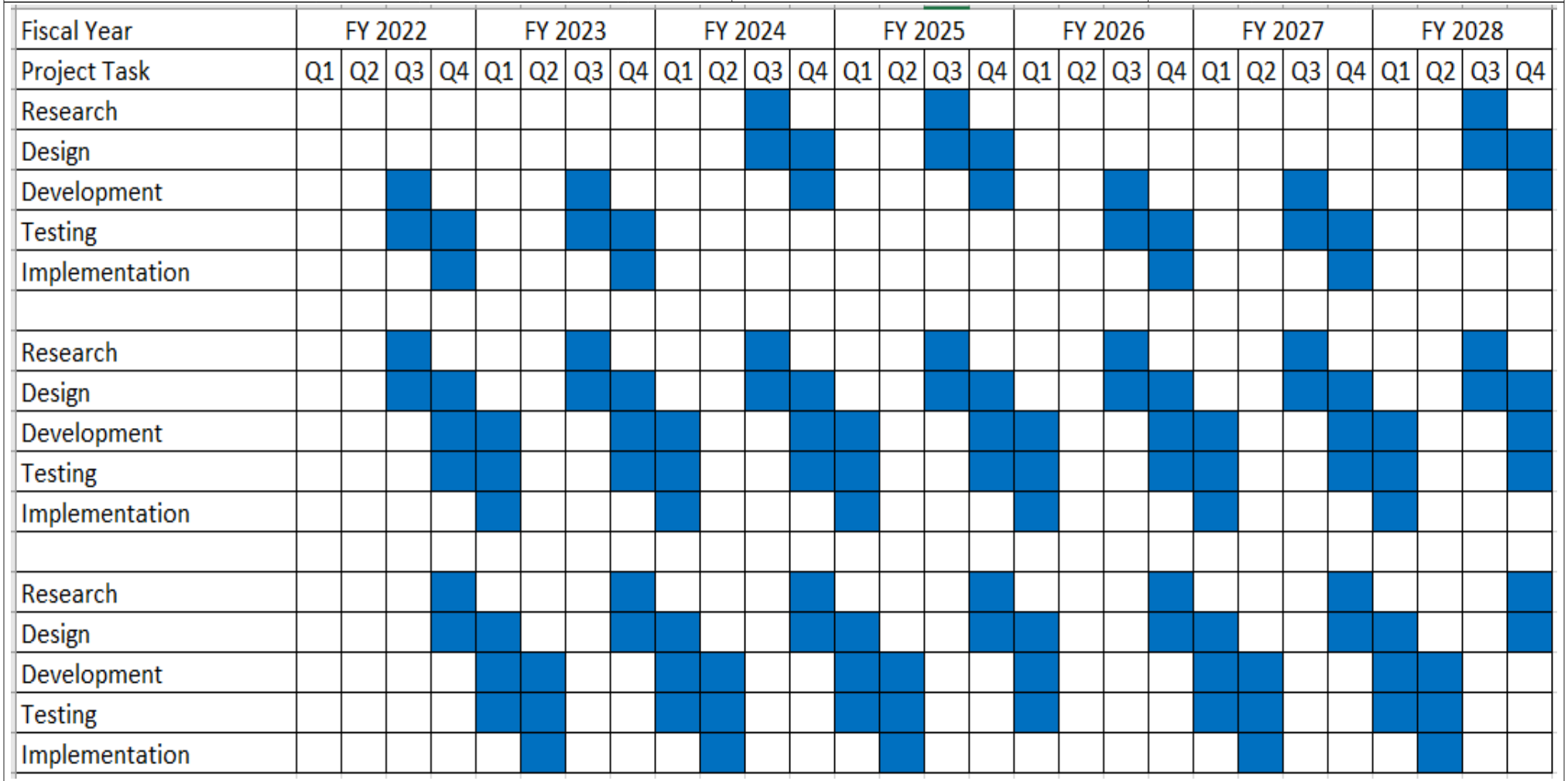

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Logistics Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0708047S / *Defense Property Accountability System (DPAS)*	**Project (Number/Name)** ABC / *DPAS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Defense Property Accountability System (DPAS)				
Defense Property Accountability System (DPAS)	1	2022	4	2026