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**Department of Defense  
Fiscal Year (FY) 2020 Budget Estimates**

March 2019



**Defense Logistics Agency**

*Defense-Wide Justification Book Volume 5 of 5*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense Logistics Agency • Budget Estimates FY 2020 • RDT&E Program

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Department of Defense  
FY 2020 President's Budget  
Exhibit R-1 FY 2020 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

25 Feb 2019

Appropriation	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
Research, Development, Test & Eval, DW	355,779	324,981		324,981
Total Research, Development, Test & Evaluation	355,779	324,981		324,981

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Department of Defense  
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Appropriation	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)
Research, Development, Test & Eval, DW	267,802				267,802
Total Research, Development, Test & Evaluation	267,802				267,802



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Department of Defense  
FY 2020 President's Budget  
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(Dollars in Thousands)

25 Feb 2019

	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
<u>Summary Recap of Budget Activities</u>				
Advanced Technology Development	297,062	273,449		273,449
System Development And Demonstration	42,564	33,780		33,780
Management Support	11,631	14,308		14,308
Operational System Development	4,522	3,444		3,444
Total Research, Development, Test & Evaluation	355,779	324,981		324,981
<u>Summary Recap of FYDP Programs</u>				
Research and Development	351,257	321,537		321,537
Central Supply and Maintenance	4,522	3,444		3,444
Total Research, Development, Test & Evaluation	355,779	324,981		324,981

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Department of Defense  
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25 Feb 2019

	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)
Summary Recap of Budget Activities					
Advanced Technology Development	225,422				225,422
System Development And Demonstration	36,931				36,931
Management Support					
Operational System Development	5,449				5,449
Total Research, Development, Test & Evaluation	267,802				267,802
Summary Recap of FYDP Programs					
Research and Development	262,353				262,353
Central Supply and Maintenance	5,449				5,449
Total Research, Development, Test & Evaluation	267,802				267,802

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Defense-Wide  
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25 Feb 2019

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

Line No	Program Element Number	Item	Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
48	0603680S	Manufacturing Technology Program	03	39,090	62,396		62,396	U
50	0603712S	Generic Logistics R&D Technology Demonstrations	03	16,105	18,127		18,127	U
52	0603720S	Microelectronics Technology Development and Support	03	241,867	192,926		192,926	U
		Advanced Technology Development		297,062	273,449		273,449	
132	0605070S	DOD Enterprise Systems Development and Demonstration	05	6,037	3,057		3,057	U
134	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	23,544	20,384		20,384	U
135	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	12,983	10,339		10,339	U
		System Development And Demonstration		42,564	33,780		33,780	
164	0605502S	Small Business Innovative Research	06	11,631	10,454		10,454	U
178	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06		3,854		3,854	U
		Management Support		11,631	14,308		14,308	
251	0708012S	Pacific Disaster Centers	07	1,705	1,705		1,705	U
252	0708047S	Defense Property Accountability System	07	2,817	1,739		1,739	U
		Operational System Development		4,522	3,444		3,444	
		Total Research, Development, Test & Eval, DW		355,779	324,981		324,981	

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

Program Line Element No Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	S e c
48 0603680S	Manufacturing Technology Program	03	42,834				42,834	U
50 0603712S	Generic Logistics R&D Technology Demonstrations	03	10,817				10,817	U
52 0603720S	Microelectronics Technology Development and Support	03	171,771				171,771	U
Advanced Technology Development			225,422				225,422	
132 0605070S	DOD Enterprise Systems Development and Demonstration	05	2,378				2,378	U
134 0605080S	Defense Agency Initiatives (DAI) - Financial System	05	27,944				27,944	U
135 0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	6,609				6,609	U
System Development And Demonstration			36,931				36,931	
164 0605502S	Small Business Innovative Research	06						U
178 0606942S	Assessments and Evaluations Cyber Vulnerabilities	06						U
Management Support								
251 0708012S	Pacific Disaster Centers	07	1,770				1,770	U
252 0708047S	Defense Property Accountability System	07	3,679				3,679	U
Operational System Development			5,449				5,449	
Total Research, Development, Test & Eval, DW			267,802				267,802	

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

Line No	Program Element Number	Item	Act	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted	S e c
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50	0603712S	Generic Logistics R&D Technology Demonstrations	03	16,105	18,127		18,127	U
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		Advanced Technology Development		297,062	273,449		273,449	
132	0605070S	DOD Enterprise Systems Development and Demonstration	05	6,037	3,057		3,057	U
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252	0708047S	Defense Property Accountability System	07	2,817	1,739		1,739	U
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		Total Defense Logistics Agency		355,779	324,981		324,981	

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

Line No	Program Element Number	Item	Act	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO	FY 2020 Total (Base + OCO)	Se e c
48	0603680S	Manufacturing Technology Program	03	42,834				42,834	U
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135	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	6,609				6,609	U
		System Development And Demonstration		36,931				36,931	
164	0605502S	Small Business Innovative Research	06						U
178	0606942S	Assessments and Evaluations Cyber Vulnerabilities	06						U
		Management Support							
251	0708012S	Pacific Disaster Centers	07	1,770				1,770	U
252	0708047S	Defense Property Accountability System	07	3,679				3,679	U
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50	03	0603712S	Logistics Research and Development Technology (Log R&D).....	Volume 5 - 17
52	03	0603720S	Microelectronics Technology Development and Support (DMEA).....	Volume 5 - 29

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134	05	0605080S	Defense Agencies Initiative (DAI) - Financial System.....	Volume 5 - 45
135	05	0605090S	Defense Retired and Annuitant Pay System (DRAS).....	Volume 5 - 59

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178	06	0606942S	Cyber Vulnerability Assessment and Mitigation.....	Volume 5 - 69

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

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252	07	0708047S	Defense Property Accountability System (DPAS).....	Volume 5 - 77

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Defense Agencies Initiative (DAI) - Financial System	0605080S	134	05.....	Volume 5 - 45
Defense Property Accountability System (DPAS)	0708047S	252	07.....	Volume 5 - 77
Defense Retired and Annuitant Pay System (DRAS)	0605090S	135	05.....	Volume 5 - 59
DoD Enterprise Systems Development and Demonstration	0605070S	132	05.....	Volume 5 - 39
Logistics Research and Development Technology (Log R&D)	0603712S	50	03.....	Volume 5 - 17
Manufacturing Technology Program (ManTech)	0603680S	48	03.....	Volume 5 - 1
Microelectronics Technology Development and Support (DMEA)	0603720S	52	03.....	Volume 5 - 29
Pacific Disaster Center	0708012S	251	07.....	Volume 5 - 71
Small Business Innovative Research (SBIR)	0605502S	164	06.....	Volume 5 - 65

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Defense Logistics Agency **Date:** March 2019

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>					<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	19.736	39.090	62.396	42.834	-	42.834	43.045	43.250	44.016	44.903	Continuing	Continuing
IBMP: <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	14.157	12.387	30.637	19.608	-	19.608	19.335	19.167	19.435	19.435	Continuing	Continuing
AAA: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	4.302	17.774	26.296	17.840	-	17.840	18.285	18.707	19.244	19.244	Continuing	Continuing
OOO: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	1.277	8.929	5.463	5.386	-	5.386	5.425	5.376	5.337	6.224	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 lower.

DLA ManTech is aligned into three Strategic Focus Areas (SFA): 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.

- MVSS 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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Logistics Agency			Date: March 2019			
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)				
<div>• 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 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.</div>						
B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget		40.511	49.667	40.848	-	40.848
Current President's Budget		39.090	62.396	42.834	-	42.834
Total Adjustments		-1.421	12.729	1.986	-	1.986
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-0.017	-0.030			
• Congressional Rescissions		-	-			
• Congressional Adds		-	15.000			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-1.404	-2.241			
• Program Adjustment (AM)		-	-	2.000	-	2.000
• Inflation Adjustment		-	-	-0.014	-	-0.014
Congressional Add Details (\$ in Millions, and Includes General Reductions)					FY 2018	FY 2019
Project: IBMP: Improving Industrial Base Manufacturing Processes (formerly Material Availability)						
Congressional Add: Digital Innovation Design for Reliable Castings Performance					-	5.000
Congressional Add: Battery Network for All Solid-State Battery Development					-	10.000
Congressional Add Subtotals for Project: IBMP					-	15.000
Congressional Add Totals for all Projects					-	15.000
Change Summary Explanation						
Directed Federally Funded Research Development Center (FFRDC) reductions of \$0.017 million and \$0.030 million for FY2018 and FY2019 respectively.						



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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603680S / Manufacturing Technology Program (ManTech)	
<p>In FY2019, ManTech received a Congressional Add for \$5 million to Castings for digital innovation design for reliable castings performance and \$10 million in Battery Network for All Solid-State Battery Development, for a total of \$15 million.</p> <p>FY2020 Additive Manufacturing Program increased under the Improving Industrial Base Manufacturing (IIBM) SFA for increased focus and priority in exploring and developing AM technology applications to DoD hard-to-procure parts with existing support agreements with Department of the Army, NAVSEA, NAVAIR, USMC, and Department of Energy, as well as partnering with academia for business model development.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
IBMP: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	14.157	12.387	30.637	19.608	-	19.608	19.335	19.167	19.435	19.435	Continuing	Continuing

## **A. Mission Description and Budget Item Justification**

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

The Subsistence Network (SUBNET) program is the successor to the Combat Rations Network R&D program. SUBNET focuses on solutions to develop and promote manufacturing improvements in the subsistence supply chain. The program's expanded areas of interest include: combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense developments, garrison feeding, nutrition and health, storage and packing solutions, surge and sustainment support, and water security. SUBNET forms a community of practice with Military Services, U.S. Department of Agriculture, Natick Soldier Research Development, and Engineering Center; Academia, and Industry to research and promote manufacturing improvements in the Subsistence Supply Chain with the goals of maximizing capability and capacity to produce, and to encourage innovation and modernization needed to leverage the latest technologies. Desired outcomes include: reduced cost, increased efficiencies, 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 ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered, up to 10% are castings. This program includes tasks 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 Associations 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

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019	
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)	
<p>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 ~2% of National Stock Number (NSN) Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered, up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where these technologies will be tested and implemented in conjunction with the 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.</p> <p>The Battery Network (BATNET) 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. BATNET conducts R&amp;D initiatives to address sustainment gaps and bridge technical solutions into higher a Manufacturing Readiness Level (MRL) for specific groups of batteries. BATNET 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&amp;D efforts to insert new technology and practices into the existing DLA battery inventory.</p> <p>The Additive Manufacturing (AM) program objective is to establish AM as an effective alternative to conventional manufacturing and document the process for AM benefits. DLA is pursuing all AM technology as a lead-time and inventory reduction enabler. The AM effort pursues alternate means of supply for products that are otherwise non-procurable or susceptible to procurement issues due to an unresponsive manufacturing vendor base. The AM effort includes the identification of AM candidates among the population of products that are needed but hard to obtain, costly or have long manufacturing lead times. The AM effort requires management of 3D digital technical and manufacturing data. In addition, the AM effort includes the development of the processes that will tie the designers, engineers, maintainers, logisticians, procurement managers and the vendor base into a seamless AM procurement stream. Potential benefits include products that can address an unfulfilled Warfighter readiness need by reducing production lead times, production costs, storage costs, transportation costs and in some cases fuel consumption due to lighter design and material options. DLA R&amp;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.</p>			
B. Accomplishments/Planned Programs (\$ in Millions)			
Title: Improving Industrial Base Manufacturing Processes (formerly Material Availability)			
FY 2019 Plans:			
The Subsistence Network (SUBNET) program plans to research and execute short-term innovative projects to improve the subsistence supply chain in FY2019, and continue efforts from FY2018. SUBNET will attend subsistence trade and industry events to leverage technology innovations and promote manufacturing improvements. The program will also pursue Small Business Innovation Research (SBIR) topics in Subsistence. The SUBNET program will work with community partners (military services, industry, and academia) to leverage the latest technologies, encourage innovation and modernization, and promote			
	FY 2018	FY 2019	FY 2020
	12.387	15.637	19.608

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	<b>Project (Number/Name)</b> IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>manufacturing improvements in the subsistence supply chain. The program also plans to collaborate with the Defense Advanced Research Projects Agency on their future projects for synergy and also incorporating them as a potential transition partner.</p> <p>The Casting program plans to research, develop and deploy innovative and technical solutions to ensure a viable and competitive domestic industrial base for the DoD and DLA in support of the needs of the warfighter. The program uses competitively awarded contracts to fulfill these requirements; projects are required to include a business case with specific metrics and a transition plan for success. The Casting program works with industry, academia, and the leading Industry Associations to identify improvements to materials, processes, and business practices of the nation's metal casting industry. The Casting program will continue the execution and monitoring of projects approved and awarded in prior years while maintaining focus on future development and needs.</p> <p>The Forging program will investigate, develop and deploy innovative enterprise and technical solutions to strengthen the forging supply chain and the forging industry. The program will explore alternative forging manufacturing methods, materials and modeling to reduce production lead-time and costs. Enhancements to modeling and simulation software coupled with forging process and post-processing improvements are some projects that align the forging program with fulfilling the needs of the warfighter. The Forging program will, with a Broad Agency Announcement (BAA), solicit industry, academia, and industry associations for new projects in alignment with the strategic focus and future needs of the DoD and DLA.</p> <p>The Battery Network (BATNET) program will initiate new projects for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. The BATNET program will also leverage new battery manufacturing technologies for the supply chain that have been developed by industry – advanced electrode production, low cost materials production or recycling, advanced performance cells, and deep-discharge lithium-ion capabilities. The program will continue addressing additional requirements for manufacturing and material improvements in the vacuum electron tube supply base.</p> <p>The Additive Manufacturing (AM) program plans to fund technically proficient efforts that accelerate the rapid qualification and certification methodologies for AM items, identify the best AM applications for castings and forging preforms, achieve precise repeatability of part fabrication using an AM technical data package at simultaneous geographic points of need and prove the delivery of AM parts to warfighters deployed at expeditionary sea, land or air bases. Using market research, requests for information/proposals, BAA, DLA R&amp;D will identify the best courses of action to negotiate technical, testing and intellectual property data for AM fabrication to keep these items competitive. The DLA R&amp;D efforts include the proof of concept of using digital thread methodologies to effectively manage manufacturing data and maintain a consistent AM product from design through qualification and acceptance. Collaboration will continue with the Military Service Engineering Support Activities (via Service-</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency			<b>Date:</b> March 2019		
<b>Appropriation/Budget Activity</b> 0400 / 3		<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>		<b>Project (Number/Name)</b> IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>			<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>level agreements with the Army, Navy, Marine Corps, Air Force) and the Department of Energy by providing funding for AM work identified under the respective agreements. The partnership with Oak Ridge National Laboratory (ORNL) will allow further options with the Big Area AM (BAAM) family of parts. DLA will leverage Military Services and Industry collaboration to develop digital verification and validation (including measures of effectiveness and key performance parameters) of AM technical data and first article testing for polymers and metals, and critical and non-critical items. These efforts seek to increase the number of AM parts qualified for procurement and achieve savings from the associated lead-time, storage costs, transportation costs, in some cases reduction of fuel consumption due to lighter design and material options.</p> <p><b>FY 2020 Plans:</b></p> <p>The Subsistence Network (SUBNET) program plans to research and execute short-term innovative projects to improve the subsistence supply chain in FY2020 and beyond. SUBNET will attend subsistence trade and industry events to leverage technology innovations and promote manufacturing improvements, continuing to expand and revise its internal Strategic Program Roadmap based upon the latest food supply chain emerging and technological advancements. Through market research, visits to academia Science and Technology Departments, and Broad Agency Announcements (BAA), DLA R&amp;D SUBNET will seek to research and test areas utilizing drones technology, food irradiation and plasma technology for fresh fruits and vegetables shelf-life extension, and block chain use cases in the subsistence supply chain. The program will also continue to pursue Small Business Innovation Research (SBIR) topics in Subsistence. The SUBNET program will work with community partners (military services, industry, and academia) to leverage the latest technologies, encourage innovation and modernization, and promote manufacturing improvements in the subsistence supply chain. The program will also collaborate with the Defense Advanced Research Projects Agency on their future projects for synergy and as a potential transition partner.</p> <p>The Casting program will continue to monitor awarded contracts for 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 technology that includes robotic and additive manufacturing methods and implementation, new test processes and procedures to evaluate cast materials, computer simulation and modeling to decrease lead-time and increase quality. 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.</p> <p>The Forging program will award contract(s) based on responses to the BAA. The projects included in the contracts will focus 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. These projects will be in alignment with the needs of the DoD and DLA aimed and supporting and fulfilling the needs of the warfighter.</p>					

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<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	<b>Project (Number/Name)</b> IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<p>The Battery Network (BATTNET) program will continue, as well as initiate new projects for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. The BATTNET program will also leverage new battery manufacturing technologies for the supply chain that have been developed by industry – advanced electrode production, low cost materials production or recycling, advanced performance cells, and deep-discharge lithium-ion capabilities. The program will continue addressing additional requirements for manufacturing and material improvements in the vacuum electron tube supply base.</p> <p>The Additive Manufacturing (AM) program plans to finance technical efforts from the military services, industry, and academic institutions that have the potential to accelerate the qualification, certification and fabrication methodologies for AM applications and create sources of AM supplies or services for DLA. DLA R&amp;D will identify the best AM applications for castings and forging preforms, achieve precise robustness-repeatability-reproducibility of part fabrication using an AM technical data package in a distributed manufacturing setting and prove the delivery of AM parts to warfighters deployed at expeditionary sea, land or air bases. DLA R&amp;D will fund efforts to expedite creation of digital models and related design and testing information to help establish and expand the DoD digital library of AM parts to solve issues with obsolescence, low volume, long-lead, costly parts. Using market research, requests for information/proposals, Broad Agency Announcements (BAA), DLA R&amp;D will test the best courses of action for machine learning and artificial intelligent solutions to integrate information from several logistics, engineering, legal, and supplier sources to make efficient AM decisions. These efforts seek to increase the number of AM parts qualified for procurement and achieve savings from the associated lead-time, storage costs, transportation costs, in some cases reduction of fuel consumption due to lighter design and material options. Desired outcomes include: rapid cast production and repair of castings using AM, exploration of improved reverse engineering processes for AM purposes, and optimization of polymer and metal AM production to obtain land, air and sea and expeditionary platform spare parts. Overall DLA Enterprise AM efforts will provide alternatives in product realization in order to address unfulfilled Warfighter readiness needs.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> FY2020 increase is due to change in baseline for a funding increase of \$2 million in FY2020 for the Additive Manufacturing Program. This additional funding is for increased focus and priority in exploring and developing AM technology applications to DoD hard-to-procure parts with existing support agreements with Department of the Army, NAVSEA, NAVAIR, USMC, and Department of Energy, as well as partnering with academia for business model development. Additionally, the FY2020 baseline already included a planned \$1.507 million increase to begin to automate combat rations visual inspections and prepare for future innovative nanotechnology packaging systems for combat rations.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		12.387	15.637
		19.608	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	<b>Project (Number/Name)</b> IBMP / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>

	FY 2018	FY 2019
<b>Congressional Add:</b> Digital Innovation Design for Reliable Castings Performance <b>FY 2019 Plans:</b> This project will develop a set of design tools to allow modern engineers to improve casting design. These design tools are based on modern property measurements and validated by testing, allowing engineers to create cast parts that are reliable, high performance and cost efficient for critical DOD applications.	-	5.000
<b>Congressional Add:</b> Battery Network for All Solid-State Battery Development <b>FY 2019 Plans:</b> Focus on the production development and transition of solid-state electrolyte technology for military lithium-ion batteries that demonstrates a significant increase in available energy density and safety, eliminates the need for toxic flammable electrolyte, and reduces the complexity of battery management systems. Projects will enable improvements to the dismounted warfighter's capability by reducing battery weight for combat operations, as well as significantly increasing operating time of equipment and weapons systems.	-	10.000
<b>Congressional Adds Subtotals</b>	-	15.000

## **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.

## **E. Performance Metrics**

40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
AAA: Maintaining Viable Supply Sources (formerly High Quality Sources)	4.302	17.774	26.296	17.840	-	17.840	18.285	18.707	19.244	19.244	Continuing	Continuing
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 Material Acquisition Electronics (MAE) program.												
The Program Roadmap has two major thrusts areas: Digital Microcircuits and Linear/Analog Microcircuits. The program has several projects addressing specific classes of obsolescent microcircuit technologies. Over the past several years, obsolescence in this class of microcircuits has greatly increased and has become a significant concern. These are classes of microcircuits that are expected to become non-procurable in FY2019 and beyond. Without the technologies planned on the MAE Roadmap, DLA will not be able to support DoD’s requirements for high quality spare parts for critical electronic systems and subsystems.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Maintaining Viable Supply Sources (formerly High Quality Sources)									17.774	26.296	17.840	
FY 2019 Plans: MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. It will begin digital microcircuit process development at the 250 nanometer technology node including development of electron-beam lithography techniques. MAE will continue a major new thrust in emulation to address Linear Microcircuits in addition to its traditional focus on Digital. Several efforts will address basic design, manufacturing, electrical test and quality/reliability requirements for establishing a basis for product-oriented developments across the FYDP. MAE will complete and transition 20-Volt operational amplifier emulation capability into full-scale production increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. MAE will begin 40-Volt operational amplifier and analog switch projects started in FY2018. It will continue applying 350 nanometer emulation technology to specific part families for additional NSNs including Dual-Port Static Random Access Memory (SRAM). MAE will continue to explore using Additive Manufacturing techniques for non-semiconductor aspects of microcircuit manufacturing.												
FY 2020 Plans: MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. It will complete and transition TTL-compatible CMOS digital logic emulation into full scale production. It will continue process development at the 250 nanometer technology node and continue process												



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	<b>Project (Number/Name)</b> AAA / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
development for Linear/Analog Microcircuits. It will begin additional Linear/Analog emulation projects for types/groups of parts, prioritized based on customer requirements.			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> FY 2020 returns the AME program to its baseline after the proposed FY 2019 one-year \$9 million investment in equipment to graduate the Advanced Microcircuit Emulation program from soon to be antiquated photolithographic manufacturing techniques to use the more advanced electron beam lithography microcircuit manufacturing methods, which will support at least two future generations of technology over 10 to 15 years.			
<b>Accomplishments/Planned Programs Subtotals</b>		17.774	26.296
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> 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.			
<b>E. Performance Metrics</b> 40% of applicable projects (ex. non-studies) will transition.			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
OOO: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)	1.277	8.929	5.463	5.386	-	5.386	5.425	5.376	5.337	6.224	Continuing	Continuing
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.												
The Military Unique Sustainment Technology (MUST) program's focus 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 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 shorten the time needed to transition Combat Uniforms and Individual Equipment from development to operational use from years to months. 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 automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end-to-end supply chain.												
The DLIR program researches core technology to improve the quality, speed, and interoperability of logistics data acquisition and management to enable and streamline DLA operations. DLA must transform 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 fundamental shift for DLA is driven by the Model-Based Enterprise (MBE) approach, which is influencing the way industry is delivering design and development data for weapon systems to the Military Services and the way the Military Services in turn manage and provide the data to DLA. DLA Logistics Operations, DLA Acquisition, DLA Tech/Quality, and the Defense Standardization Program Office (DSPO) are key stakeholders in the DLIR initiatives to modernize the representation and delivery of weapons systems data.												
The EMT program addresses emerging and out of cycle requirements that always occur as DLA strives to maintain readiness of the aging weapon systems.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)									8.929	5.463	5.386	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p><b><i>FY 2019 Plans:</i></b></p> <p>The MUST program plans to transition the MUST Developed Tools to DLA Troop Support Clothing and Textiles (C&amp;T) and applicable Service stakeholders. The tools to be implemented are: 1. Supply Request Package (SRP) Tool for Joint Service and DLA Processes; 2. TexSpec Tool for C&amp;T Product Description and Interim Change management; 3. Product Test Center (PTC) Management Tool for source testing and color shade management; 4. MUSTSize Tool for joint tariff optimization.</p> <p>The DLIR program plans to continue assisting DLA to improve the quality, speed, and interoperability of logistics data across the Enterprise and for the defense industrial base. DLIR will continue promoting and demonstrating the use of methodologies that are computer-aided design(CAD) software-neutral across the military service Engineering Support Activities (ESAs) and Program Management Offices (PMOs) that provide DLA with technical data for Class IX parts. DLIR will also initiate the Connecting the Model-Based Enterprise project working closely with a selected PMO or ESA as it stands up its Product Lifecycle Management (PLM) system to operationally test different methods and processes to obtain technical data packages for selected Class IX weapon system parts resident in the PLM system.</p> <p>The EMT program enables DLA to investigate new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts. This program enables the Agency to advance those technologies sooner in order to provide to the warfighter earlier. Small business Innovation Research (SBIR) phase III efforts (which cannot be funded with SBIR funds) are a prime example of activities that will be funded with these funds, examples include emerging magnetic braking technologies, and addressing strategic materials shortage/risk. Efforts will begin in FY2019 to advance Digital Manufacturing by developing a comprehensive approach to take advantage of integrated, computer-based systems of simulation, three-dimensional (3D) visualization, analytics and various collaboration tools to create and manufacture products to support the warfighter. Additionally, any emergent Strategic Materials requirements will be addressed through the EMT program.</p> <p><b><i>FY 2020 Plans:</i></b></p> <p>FY2020 will begin a new program in support of the DLA Troop Support Clothing and Textile (C&amp;T) mission. Digital Data Modernization for Manufacturing (D2M2) will develop and implement efficient processes and technologies that enable combat uniform and individual equipment technical data to be seamlessly used throughout the DLA C&amp;T Supply Chain. This will be achieved by working with the Services and the DLA C&amp;T industrial base to refine the processes that are used, define item technical requirements, and effectively communicate them to the industrial base. For example, settings for test equipment would be directly fed into the machine and results would be directly communicated to quality assurance managers. Test results would be more accurate, traceable and timely.</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
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**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
A new broad agency announcement (BAA) will be released for an anticipated FY2020 award. The BAA will identify technical opportunities to develop and use digital data for manufacturing modernization.			
The DLIR program will continue with the Connecting the Model-Based Enterprise project and initiate the Logistics Interoperability Technology Extension (LITE) project. LITE will enable improved interoperability between DoD internal and external data sources. For example, LITE proposes publishing logistics documents as data instead of PDF by utilizing advanced content interpretation techniques to extract and model the data inside the document. This approach will be based upon open standards to encourage adoption and integration between DLA and non-DLA systems.			
The EMT program continues to enable DLA's investigation of new disruptive technology advances that may be implemented in the nearer term, without degrading well established program efforts. This program enables the Agency to advance those technologies sooner in order to provide to the warfighter earlier. Small Business Innovation Research (SBIR) phase III efforts (which cannot be funded with SBIR funds) are a prime example of activities that will be funded with these funds, examples include emerging magnetic braking technologies, and addressing strategic materials shortage/risk. Efforts will continue in FY2020 to advance Digital Manufacturing by developing a comprehensive approach to take advantage of integrated, computer-based systems of simulation, three-dimensional (3D) visualization, analytics and various collaboration tools to create and manufacture products to support the warfighter. Additionally, any emergent Strategic Materials requirements will be addressed through the EMT program.			
<b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> Decrease is due to Military Unique Sustainment Technology (MUST) program phase-out and transition in FY 2019 and stand-up of the MUST II - Digital Data Modernization for Manufacturing (D2M2) program baseline in FY 2020.			
<b>Accomplishments/Planned Programs Subtotals</b>	8.929	5.463	5.386

**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.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019
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)

**E. Performance Metrics**

40% of applicable projects (ex; non-studies) will transition.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Defense Logistics Agency **Date:** March 2019

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>					<b>R-1 Program Element (Number/Name)</b> PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	29.634	16.105	18.127	10.817	-	10.817	10.998	11.180	11.328	11.532	Continuing	Continuing
EMM: <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic &amp; Decision Support)</i>	7.561	1.193	3.758	3.219	-	3.219	3.295	3.368	3.430	3.429	Continuing	Continuing
GLTD: <i>Improving Logistics Processes (formerly Logistics Process)</i>	10.403	9.099	3.568	4.013	-	4.013	4.125	4.211	4.277	4.277	Continuing	Continuing
04: <i>Emergent Logistics R&amp;D Requirements (formerly Innovative Products &amp; Services for DLA Customers)</i>	11.670	5.813	10.801	3.585	-	3.585	3.578	3.601	3.621	3.826	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Defense Logistics Agency (DLA) is responsible for providing to the Military Services, and other Federal Agencies, as well as combined and allied forces the full spectrum of logistics, acquisition and technical services. DLA sources and provides virtually 100 percent of the consumable items the military services need to operate – including food, uniforms, fuel and energy, medical supplies, construction and barrier materials and equipment, and more than 85 percent of the military's spare parts. DLA also provides logistics services including logistics information data, manages the reutilization of military equipment, and documents automation and production services. 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.

The DLA Log R&D program is organized into three Strategic Focus Areas (SFAs):

- **Enhancing Analysis, Modeling, and Decision Support (EAMD):** R&D efforts to develop decision support tools, such as modeling, simulation, and other analytics to improve operational strategy decision-making, forecasting, and procurement, which support more effective and efficient responses to emerging market and customer requirements.
- **Improving Logistics Processes (ILP):** R&D efforts to develop and implement advanced technology in logistics processes over and above current baseline systems.
- **Emergent Logistics R&D Requirements (ELR):** R&D 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.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / Logistics Research and Development Technology (Log R&D)
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	10.611	11.778	12.067	-	12.067
Current President's Budget	16.105	18.127	10.817	-	10.817
Total Adjustments	5.494	6.349	-1.250	-	-1.250
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	6.000	7.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.506	-0.651			
• Funds Realignment	-	-	-1.240	-	-1.240
• Inflation Adjustment	-	-	-0.010	-	-0.010

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

**Project:** GLTD: *Improving Logistics Processes (formerly Logistics Process)*

Congressional Add: *Energy Readiness Program for Liquid Hydrocarbon Fuels*

Congressional Add Subtotals for Project: GLTD

**Project:** 04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*

Congressional Add: *Energy Readiness Program for Liquid Hydrocarbon Fuels*

Congressional Add: *Supply Chain Management Program for Sustainable Product Demonstrations*

Congressional Add Subtotals for Project: 04

Congressional Add Totals for all Projects

<b>FY 2018</b>	<b>FY 2019</b>
4.000	-
4.000	-
-	7.000
2.000	-
2.000	7.000
6.000	7.000

**Change Summary Explanation**

In FY2018, the Logistics R&D program received a Congressional Add for \$4 million for the Energy Readiness Program for Woody Bio Mass conversion to liquid hydrocarbon fuels and \$2 million for the Supply Chain Management program for sustainable product demonstrations. In FY2019, the Logistics R&D program received a Congressional Add for \$7 million for the Energy Readiness program for liquid hydrocarbon fuels.

The Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.506 million and \$0.651 million in FY2018 and FY2019 respectively.



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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Logistics Agency		Date: March 2019
<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / Logistics Research and Development Technology (Log R&D)	
Realigned funding from Log R&D to Operation and Maintenance (O&M) to fund mandatory Program Management Offices (PMO) costs and project transition.		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
EMM: Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)	7.561	1.193	3.758	3.219	-	3.219	3.295	3.368	3.430	3.429	Continuing	Continuing
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 Medical Logistics Network (MLN) program supports the Medical Directorate’s mission to develop and implement the logistics and medical supply chain business practices that ensure the cost-effective and efficient distribution of medical materiel to the full range of Military Health System operations. A portion of the MLN budget was realigned to other R&D efforts due to no specific projects identified. Assessments are currently being conducted for viable R&D projects for the budgeted amounts.												
The R&D Strategic Distribution & Disposition (SDD) Program collaborates with DLA Distribution and Disposition Services to identify capability shortfalls (gaps) that allow the opportunity to address these shortfalls through major applied research efforts and to further improve operational effectiveness and efficiency in support of Warfighter’s requirements. A key objective of the SDD Program is to infuse innovative solutions into distribution and disposition operations that address inadequate legacy capabilities and the challenges of future worldwide distribution, disposition, reutilization, and retrograde requirements.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Enhancing Analysis, Modeling, and Decision Support									1.193	3.758	3.219	
FY 2019 Plans:												
The Medical Logistics Network (MLN) program supports the Medical Directorate’s mission to develop and implement the logistics and medical supply chain business practices that ensure the cost-effective and efficient distribution of medical materiel to the full range of Military Health System operations. A portion of the MLN budget was realigned to other R&D efforts due to no specific projects identified. Assessments are currently being conducted for viable R&D projects for the budgeted amounts.												
The Strategic Distribution and Disposition (SDD) program provides applied research, analytical and decision support to DLA Distribution and Disposition Services through advanced analytical tools such as Business Case Analyses (BCAs) that support DLA Distribution and Disposition Services strategic decision making. Additionally, SDD will continue to support the Distribution Modernization Program to identify, evaluate, and test emerging and disruptive technologies that have high potential application												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>	<b>Project (Number/Name)</b> EMM / <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic &amp; Decision Support)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<p>to distribution and disposition operations. Furthermore, SDD will engage with Department of Defense (DoD) sponsored Federally Funded Research and Development Centers (FFRDCs) and University-Affiliated Research Center Laboratories (UARCs) to perform applied research in technologies such as blockchain, artificial intelligence, machine learning, Internet of Things (IoT), augmented reality, and autonomous/robotics systems.</p> <p><b><i>FY 2020 Plans:</i></b>  The Medical Logistics Network program continues to support the Medical Directorate's mission to develop and implement the logistics and medical supply chain business practices that ensure the cost-effective and efficient distribution of medical materiel to the full range of Military Health System operations. A portion of the MLN budget was realigned to other R&amp;D efforts due to no specific projects identified. Assessments are currently being conducted for viable R&amp;D projects for the budgeted amounts.</p> <p>The Strategic Distribution and Disposition program continues to provide applied research, analytical and decision support to DLA Distribution and Disposition Services and provide support to the Distribution Modernization Program. 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.</p> <p><b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b>  Decrease is due to a FY2020 funding realignment for mandatory program management office (PMO) costs and project transition.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		1.193	3.758
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
<p>The DLA R&amp;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.</p>			
<b>E. Performance Metrics</b>			
40% of applicable projects (ex. non-studies) will transition.			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
GLTD: Improving Logistics Processes (formerly Logistics Process)	10.403	9.099	3.568	4.013	-	4.013	4.125	4.211	4.277	4.277	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Improving Logistics Processes (ILP) Strategic Focus Area (SFA) encompasses R&D efforts within the Weapon System Sustainment (WSS) Program to develop and implement advanced technology in the internal DLA logistics processes. To qualify for R&D funding, the R&D effort must develop and apply technology and processes over and above current baseline IT systems and continuous improvements efforts.

Although all DLA processes are in scope, the strategic focus area for FY2019 has four thrusts: Procurement, Inventory Management, Planning, and Retail Operations process improvements.

Innovative process changes and new technologies will be researched in these areas to drive improvements to internal costs, reduce award delays, reduce the threat of counterfeit parts, improve demand forecasting, and increase retail operational efficiency. Researching the use of artificial intelligence/Machine Learning blockchain technology, demand forecasting, adoption of Commercial Acquisition Innovation and Integration of maintenance and supply data in DLA processes are major research areas that will be pursued in the coming years.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Improving Logistics Processes (ILP)	5.099	3.568	4.013
<b>FY 2019 Plans:</b> The Weapon Systems Sustainment (WSS) program will continue working with Procurement to implement long term process improvement plans to include projects in the areas of administrative and production lead time estimation and procurement of commercially available parts (e-commerce). Another main thrust for FY2019 will be the execution of projects to improve retail operations inventory strategy and to research new processes that leverage DLA’s capabilities in operational and tactical retail operations. WSS will also leverage condition based maintenance data from the Services to enhance planning for retail operations and depot maintenance logistical support. Initial studies will focus on a single Service. Artificial intelligence / machine learning capability projects will begin in FY2019 and continue for years to come as additional opportunities are identified. Also, machine-learning techniques will be applied to processes for lead-time estimation, demand forecasting, low demand inventory strategies, and retail operation strategies. In addition, the use of blockchain technology in Tech Quality (TQ) processes that monitor vendor risk will be researched as an initial study of using this technology in DLA processes.			
<b>FY 2020 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>	<b>Project (Number/Name)</b> GLTD / <i>Improving Logistics Processes (formerly Logistics Process)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<p>The Weapon Systems Sustainment program will continue to explore new use case studies for disruptive technologies. Additional areas of interest for the application of artificial intelligence / machine learning include the ability to identify returned parts and predict fraudulent activity. WSS will also explore opportunities for blockchain technology based on the findings from the initial study in FY2019. Potential areas of interest include tying financial transactions to physical movement of inventory and electronic contracts. In FY2020, projects started in FY2019 will continue. Artificial intelligence projects, which developed a viable proof of concept in FY2019, will progress to pilot studies for final model design and testing in the process. Projects to develop methods to use condition-based maintenance in DLA processes will continue. WSS will work with additional Services to incorporate the data into DLA's inventory and demand forecasting processes. In addition, WSS projects will continue to study e-commerce methods and develop recommendations for incorporating internet-based purchases into DLA's acquisition process.</p> <p><b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> No significant change.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		5.099	3.568
		<b>FY 2018</b>	<b>FY 2019</b>
<b><i>Congressional Add:</i></b> Energy Readiness Program for Liquid Hydrocarbon Fuels		4.000	-
<p><b><i>FY 2018 Accomplishments:</i></b> Developed and improved upon a production process that converts cellulosic (woody) biomass in to synthetic crude oil. The synthetic crude can be further processed into hydrocarbon fuels suitable for commercial and military use. In FY18, the project successfully accomplished several pilot-plant level production runs of synthetic oil in the goal of validating commercial-scale production capability of the process.</p> <p>Note: The FY2018 \$4 million Congressional add is for and was executed by the Emergent Logistics R&amp;D Requirements Strategic Focus Area (SFA) for the Energy Readiness Program.</p>			
<b>Congressional Adds Subtotals</b>		4.000	-
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
<p>The DLA R&amp;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.</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>	Project (Number/Name) GLTD / <i>Improving Logistics Processes (formerly Logistics Process)</i>

**E. Performance Metrics**  
40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>				Project (Number/Name) 04 / <i>Emergent Logistics R&amp;D Requirements (formerly Innovative Products &amp; Services for DLA Customers)</i>			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
04: <i>Emergent Logistics R&amp;D Requirements (formerly Innovative Products &amp; Services for DLA Customers)</i>	11.670	5.813	10.801	3.585	-	3.585	3.578	3.601	3.621	3.826	Continuing	Continuing

**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.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Emergent Logistics R&D Requirements	3.813	3.801	3.585
<b>FY 2019 Plans:</b> The Energy Readiness Program (ERP) will focus on determining R&D solutions for ongoing issues affecting fuel and fuel additive quality and operational requirements (e.g. thermal stability, storage stability, ignition capability). The program will assist the military services in the qualification and certification of alternative fuels to meet military specification requirements; this will be parallel to the availability of military resources necessary to complete these efforts. The ERP program will investigate and prototype, as appropriate, drone technologies applied to the energy operations.  The Supply Chain Management (SCM) program address the emerging capabilities shortfalls that occur in the supply chain through major research opportunities. Initiatives will align strategically and produce benefits such as reduced operating costs, enhanced organizational responsiveness and reliability, network resiliency, and streamlined customer service. Additionally, SCM will complete the Advanced Thermoelectric Technology project to improve the current thermoelectric heater technology so it is more			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>	<b>Project (Number/Name)</b> 04 / <i>Emergent Logistics R&amp;D Requirements (formerly Innovative Products &amp; Services for DLA Customers)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
fuel-efficient, has an increased heating range, reduced maintenance requirements, and a longer service life. SCM will also work with DLA HQ Information Operations J6 on Robotic Process Automation (RPA) efforts.			
<b>FY 2020 Plans:</b> The Energy Readiness Program will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers. ERP will focus on determining R&D solutions for ongoing issues affecting fuel and fuel additive quality and operational requirements (e.g. thermal stability, storage stability, ignition capability). The program will continue to assist the military services in the qualification and certification of alternative fuels to meet military specification requirements; this will be parallel to the availability of military resources necessary to complete these efforts.			
The Supply Chain Management program will continue to address the emerging capabilities shortfalls that occur in the supply chain through major research opportunities.			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Decrease is due to a FY2020 funding realignment for mandatory program management office (PMO) costs and project transition.			
<b>Accomplishments/Planned Programs Subtotals</b>		3.813	3.801
		<b>FY 2018</b>	<b>FY 2019</b>
<b>Congressional Add:</b> Energy Readiness Program for Liquid Hydrocarbon Fuels		-	7.000
<b>FY 2019 Plans:</b> Develop innovative technologies to produce hydrocarbon biofuels from cellulosic (plant/vegetable) matter. This effort will further develop the upscaling of woody biomass-to-fuel processes.			
<b>Congressional Add:</b> Supply Chain Management Program for Sustainable Product Demonstrations		2.000	-
<b>FY 2018 Accomplishments:</b> Began the identification of emerging technologies to meet Department of Defense (DoD) requirements through technical data evaluations. Demonstrations across up to five DoD installations will be conducted to prove the technologies in an operational environment for application and transition of successful technologies DoD-wide.			
<b>Congressional Adds Subtotals</b>		2.000	7.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603712S / <i>Logistics Research and Development Technology (Log R&amp;D)</i>	<b>Project (Number/Name)</b> 04 / <i>Emergent Logistics R&amp;D Requirements (formerly Innovative Products &amp; Services for DLA Customers)</i>

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

### Remarks

### D. Acquisition Strategy

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

### E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Defense Logistics Agency **Date:** March 2019

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					PE 0603720S / Microelectronics Technology Development and Support (DMEA)							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	480.635	241.867	192.926	171.771	-	171.771	156.427	159.082	169.077	172.651	Continuing	Continuing
001: Technology Development	261.501	112.697	71.819	79.101	-	79.101	58.429	59.504	60.439	62.071	Continuing	Continuing
003: Trusted Foundry	219.134	129.170	121.107	92.670	-	92.670	97.998	99.578	108.638	110.580	Continuing	Continuing

## A. Mission Description and Budget Item Justification

The Department finds it critical to National Security to maintain an ability to produce low volume state-of-the-practice (SOTP) and legacy microelectronics that are unavailable from commercial foundries. The Defense Microelectronics Activity (DMEA) uniquely accomplishes this mission for the Department by providing a guaranteed and Trusted source of supply of microelectronics parts that are essential to combat operations. In addition DMEA provides the rare technology capability to bridge the gap between research and application allowing DMEA to develop, manage and implement innovative microelectronic solutions to enhance mission capability. This unique research and engineering capability will be leveraged to develop low-volume, high mix fabrication processes for state-of-the-art (SOTA) technologies that meet the Department's performance and reliability needs.

This is a critical capability in an atmosphere of diminishing domestic semiconductor manufacturing capability and increasing worldwide supply chain risks with threats to defense microelectronics. Trusted access to SOTA technologies remains a major challenge and therefore it is most important to develop a long term Trusted source for the Department. Threats to Defense Microelectronics include counterfeiting, Trojan horses, specific reliability issues in military environments, and rapid obsolescence coming from an unpredictable and unsecured supply chain. As fiscal pressures force the Department to maintain its weapon systems longer than originally planned, extended combat use increases their attrition and increases the need for DMEA's unique capabilities.

Microelectronics is a crucial technology and central for all operations within the Department. Yet, as vital as this technology is to Department operations, the defense market represents less than 0.1% share of the total global semiconductor market. The Department frequently requires low volume SOTP and legacy microelectronics long after commercial foundries have moved on to advanced technology levels. There is also the major challenge of the ability of Defense R&D Programs to access Trusted SOTA technologies when developing new systems. Consequently, the semiconductor industry does not respond to the Department's particular needs of low volumes, long availability time frames, or its high-level security concerns. To meet these requirements, DMEA procures commercial licenses to organically produce semiconductor technologies that are no longer commercially manufactured or are unavailable due to no-bids owing to low volume requirements. These licenses enable DMEA to be the Department's microelectronics supplier of last resort, providing the Department with a long-term, trusted, and guaranteed source of these critical parts. This proven model can be extended to SOTA technologies by acquiring advanced commercial process Intellectual Property (IP) and implementing it in a copy exact approach.

DMEA provides increasingly rare microelectronics design and fabrication expertise to ensure that the Department can field systems capable of ensuring technological superiority over potential adversaries. DMEA provides decisive, quick turn solutions for defense, intelligence, special operations, cyber and combat missions as well as microelectronic components that are unobtainable in the commercial market. DMEA has established increased ties with the Intelligence Community (IC) and Combatant Commanders to understand their specific threats and opportunities that can be exploited by quicker, more resilient microelectronic solutions. This knowledge of varying

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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)	
<p>requirements across a broad and diverse range of combatant environments and missions – along with its unique technical perspective – allows DMEA to develop, manage and implement novel microelectronic solutions to enhance mission capability. DMEA uses these cutting-edge technology capabilities and products in the solutions it develops for its military clientele. After many years of performing analogous efforts, the technical experience, mission knowledge, and practical judgment that are gained from preceding efforts are incorporated into subsequent technology maturation projects. DMEA has years of experience understanding the maturity of US and world microelectronics technology and knows what it takes to adapt the technology for the US warfighter. Based on the results of the knowledge DMEA acquires through technology forecasting, effective modeling/simulation, prototyping and experimentation, DMEA influences program requirements with recommended improvements and advancements. DMEA’s capabilities make it a key tool that can be leveraged by the entire US Government in the intelligent and rapid development and application of advanced technologies to identified military needs.</p> <p>Working alongside industry, DMEA utilizes a business model that establishes a pathway that accelerates the delivery of superior semiconductor technologies. DMEA’s uniquely flexible foundry supports the Department with a wide variety of integrated circuits using various processes that were developed by commercial manufacturers and which are now guaranteed to remain in one location for as long as they are needed. To obtain these processes, DMEA works closely with U.S. semiconductor industry partners to acquire process licenses. DMEA incorporates commercial technology, along with accelerated acquisition methods to accelerate delivery of needed capability. In this way, DMEA revolutionizes the way the Department leverages commercial technology by exploiting business-cycle opportunities to access these technologies. In this way, the government ensures perpetual access to this technology without bearing the high, upfront process development and qualification costs.</p> <p>These Government-held licenses allow for the transfer to DMEA of industry-developed IP and the related processes for Department needs. These licenses ensure no commercial conflicts by including industry’s right to bid first on resulting production volumes. DMEA always looks to industry first to see if it can provide the required components. If industry cannot or will not, only then does DMEA provide the necessary prototypes and low volume production order. A critical element required to make this business model work effectively is protection of the industry partners’ valuable IP and processes. DMEA is Government owned and operated, providing the structure and confidence necessary to ensure them that their IP is protected from potential competitors. This strategic and cooperative industry partnership approach allows DMEA to use industry-developed IP and processes by acquiring, installing, and applying them toward meeting the immediate and long-term needs of the Department. This unique capability is essential to all major weapon systems, combat operations, and support needs. As such, DMEA serves the Department, other US Agencies, industry and Allied nations.</p> <p>DMEA assists hundreds of Department programs every year. DMEA has provided its specialized engineering assistance and capabilities to older systems, current systems, and even to programs not yet in the production phase. This includes the Counter-Rocket, Artillery, and Mortar (C-RAM) System, F-18 Super Hornet, F-22 Raptor, F-35, RQ-4 Global Hawk, MQ-9 Reaper, AEGIS Advanced Surface Missile System, Advanced Medium-Range Air-to-Air Missile (AMRAAM), HH-60G Pave Hawk Helicopter, Evolved Sea Sparrow Missile (ESSM), among many other programs. DMEA assists the Combatant Commands (COCOMs) including Special Ops, Cyber, Intelligence, and the Radiation-Hard communities.</p>		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	219.803	168.931	172.442	-	172.442
Current President's Budget	241.867	192.926	171.771	-	171.771
Total Adjustments	22.064	23.995	-0.671	-	-0.671
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	30.000	30.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-7.936	-6.005			
• Fourth Estate IT Optimization Savings	-	-	-0.278	-	-0.278
• Inflation Adjustment	-	-	-0.393	-	-0.393

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

**Project:** 003: *Trusted Foundry*

    Congressional Add: *Trusted Foundry*

	<b>FY 2018</b>	<b>FY 2019</b>
	30.000	30.000
Congressional Add Subtotals for Project: 003	30.000	30.000
Congressional Add Totals for all Projects	30.000	30.000

**Change Summary Explanation**

The FY2018 and FY2019 increases are for continued support of the top four FY2018 microelectronics initiatives, including full access to the GlobalFoundries Fab 8 (14 nm) foundry, associated upgrades to GlobalFoundries's ASIC design, tape-in, and test capabilities to facilitate 14 nm designs for weapon system program support (e.g., Military Global Positioning System (GPS) User Equipment (MGUE), and procurement of foundry process intellectual property.

The Small Business Innovation Research and Small Technology Transfer taxes amounted to \$7.936 million and \$6.005 million in FY2018 and FY2019 respectively.

FY2020 baseline decreased in association with the Fourth Estate IT optimization savings as well as inflation adjustments for Civilian Pay.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)				Project (Number/Name) 001 / Technology Development			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
001: Technology Development	261.501	112.697	71.819	79.101	-	79.101	58.429	59.504	60.439	62.071	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Technology Development funds provide DMEA with the core resources to execute its primary mission of providing an in-house ability to quickly develop and execute appropriate solutions to keep a weapon system operational, elevate its sophistication level, or to meet new threats. These solutions use high mix, low volume, unique microelectronics that are endemic to military requirements but are not commercially available. These funds provide for the development and support necessary to ensure rapid prototyping, insertion, and support of microelectronics technologies into fielded systems, particularly as the technologies advance. Extending this mission to include assured access to Trusted state-of-the-art (SOTA) technologies will more comprehensively ensure the integrity of microelectronics in all critical defense systems. DMEA maintains critical microelectronics design and fabrication skills to ensure that the Department is provided with systems capable of ensuring technological superiority over potential adversaries. DMEA provides an in-house capability to support these strategically important microelectronics technologies with distinctive resources to meet the Department's requirements across the entire spectrum of technology development, acquisition, and long-term support. This includes producing components to meet the Department's requirements for ultra-low volume, an extended availability timeframe, and a trusted, guaranteed and secure supply of microelectronics. These funds provide basic infrastructure upgrades to acquire IP and manufacturing capabilities of SOTA technologies, including the CMOS9LP process as well as the technical services to ensure its successful installation via the copy exact model, as well as an in-house technical staff of skilled and experienced microelectronics personnel working in state-of-the-practice facilities providing technical and application engineering support for the implementation of advanced microelectronics research technologies from inspection and analysis through design, fabrication, test, assembly, integration and installation. These funds also provide for the recapitalization and modernization of aging microelectronic infrastructure, acquisition and implementation of design and test tools, the development of advanced techniques to inspect and analyze circuits, the adaptation of tools and processes to detect increasingly sophisticated counterfeit microelectronics in the defense supply chain, and the incorporation of the process technologies that are necessary to anticipate the needs of the Department as weapon system support requirements migrate toward current state-of-the-art technologies. DMEA's capabilities make it a key resource in the intelligent and rapid application of advanced technologies to add needed performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. DMEA designs, develops, and supports vital classified assets for ongoing and time-sensitive specialized intelligence operations and missions of the Department and the Special Operations Commands.

Today's weapon systems experience extended field operations and are required to remain in service beyond planned replacement schedules, driving the need for growth in DMEA's unique capabilities. This need, along with the continual contraction of commercial resources, often makes DMEA the only available resource allowing many systems to remain operational.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Technology Development Accomplishments/Plans	112.697	71.819	79.101
<b>FY 2019 Plans:</b> DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems and modernize key capabilities . DMEA will apply advanced technologies to add performance			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	<b>Project (Number/Name)</b> 001 / <i>Technology Development</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<p>enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA's unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, extending and upgrading process IP, developing advanced techniques to inspect and analyze circuits, and adapting tools and processes to detect increasingly sophisticated counterfeit microelectronics to ensure a secure supply chain, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will complete installation of the cleanroom in the 200mm facility, and will begin installation of semiconductor fabrication equipment in the completed cleanroom. DMEA will start integration of the critical 200mm process IP into the 200mm facility.</p> <p><b><i>FY 2020 Plans:</i></b> DMEA will design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA's unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, extending and upgrading process IP, developing advanced techniques to inspect and analyze circuits, and adapting tools and processes to detect increasingly sophisticated counterfeit microelectronics to ensure a secure supply chain, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will continue installation of semiconductor fabrication equipment in the completed 200mm cleanroom. DMEA will continue integration of the critical 200mm process IP into the 200mm facility.</p> <p><b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b> FY2020 program reflects a continuation in funding for FY2019 microelectronics initiatives, including the integration of 200mm foundry process intellectual property.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		112.697	71.819
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b>			
N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 001 / <i>Technology Development</i>
E. Performance Metrics N/A		



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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>				Project (Number/Name) 003 / <i>Trusted Foundry</i>			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
003: <i>Trusted Foundry</i>	219.134	129.170	121.107	92.670	-	92.670	97.998	99.578	108.638	110.580	Continuing	Continuing

## A. Mission Description and Budget Item Justification

The Department, other agencies, and the intelligence community require uninterrupted access to state-of-the-art design and manufacturing processes to produce custom integrated circuits designed specifically for military purposes. Under DoDI 5200.44, Application Specific Integrated Circuits (ASICs) in critical/essential systems must be procured from Trusted sources in order to avoid altered or sabotaged parts. Worldwide competition from foreign, state-subsidized manufacturing facilities continues to greatly reduce the number of U.S. semiconductor fabrication facilities available to be Trusted sources. The prevalence of sophisticated offshore design and manufacturing facilities with economic incentives of state subsidies have resulted in the outsourcing of electronics component and integrated circuit services to these offshore facilities. This production capability is of increasing importance as domestic semiconductor manufacturing resources continue to decline, especially in the scarce domestic production capacity of high performance and state-of-the-art semiconductor technologies. Commercial sources of microelectronics remain inherently unpredictable and constitute a continued supply chain risk regardless of Government investment. This trend threatens the integrity and worldwide leadership of the U.S. semiconductor industry by eliminating many domestic suppliers and reducing access to Trusted fabrication sources for advanced technologies, and is of acute concern to the defense and intelligence communities. Secure communications and cryptographic applications, along with most other key defense technologies, depend heavily on high performance semiconductors where a generation of improvement often translates into significant force multipliers and capability advantages. Important defense technology investments and demonstrations carry size, weight, power, and performance goals that can only be met through the use of the most sophisticated semiconductors.

The Trusted Foundry program provides the Department with access to state-of-the-art microelectronics design and manufacturing capabilities with the added benefit of Trust, if necessary, to meet their confidentiality, integrity, availability, performance and delivery needs. The program also provides the Services and other agencies with a competitive cadre of accredited Trusted suppliers that can meet the needs of their mission critical/essential systems for Trusted integrated circuit components. The Trusted Access Program Office has contracted with commercial sources to satisfy state-of-the-art semiconductor requirements. DMEA will foster all viable alternatives to continue the vital supply of Trusted microelectronics, including the work of the DMEA Trusted Access Program Office with commercial state-of-the-art industry, as well as the extension and implementation of key process technologies for trust at DMEA. It is imperative for a wide range of technologies in ongoing and future Department systems that access to Trusted suppliers continues. Most importantly, access to Trusted Microelectronics is absolutely necessary to meet secure communication and cryptographic needs requiring state-of-the-art semiconductor technologies.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Trusted Foundry	99.170	91.107	92.670
<b>FY 2019 Plans:</b>			
Facilitate the availability of Trusted state-of-the-art semiconductor technology to DoD weapon system programs, research organizations, and other federal agencies through the DMEA Trusted Access Program Office (TAPO) contracts. Continue efforts to extend Trusted access to 14 nm technology for USG use through the TAPO contracts, and to provide access to other leading			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	<b>Project (Number/Name)</b> 003 / <i>Trusted Foundry</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
edge technologies. Enhance the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted Microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that ensure the Department has Trusted access to leading edge semiconductor technologies. Continue the development of new capabilities for the inspection and analysis of ASICs and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes. Implement a Trusted flow for new process technologies at DMEA.			
<b>FY 2020 Plans:</b> Facilitate the availability of Trusted and commercial state-of-the-art semiconductor technology to DoD weapon system programs, research organizations, and other federal agencies through the DMEA Trusted Access Program Office (TAPO) contracts. Continue efforts to extend Trusted access to 14 nm technology for USG use through the TAPO contracts, and to provide the Department and other USG-sponsored programs with access to this and other leading edge technologies. Enhance the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that ensure the Department has Trusted access to leading edge semiconductor technologies. Continue the development of new capabilities for the inspection and analysis of ASICs and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes. Implement a Trusted flow for new process technologies at DMEA.			
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> FY2020 program reflects a continuation in funding for FY2019 microelectronics initiatives, including access to the GlobalFoundries 14 nm foundry.			
<b>Accomplishments/Planned Programs Subtotals</b>		99.170	91.107
		<b>FY 2018</b>	<b>FY 2019</b>
<b>Congressional Add:</b> Trusted Foundry		30.000	30.000
<b>FY 2018 Accomplishments:</b> Sustained and accelerated capabilities to manufacture Trusted parts in accredited foundries. Developed and executed a long-term microelectronics modernization strategy for a specific case of DoD obsolescence as a pathfinder to diminish the occurrence of future obsolescence issues.			
<b>FY 2019 Plans:</b> Sustain and accelerate capabilities to manufacture trusted parts in accredited foundries.			
<b>Congressional Adds Subtotals</b>		30.000	30.000

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 003 / <i>Trusted Foundry</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	21.021	6.037	3.057	2.378	0.000	2.378	1.481	0.743	0.757	0.771	Continuing	Continuing
09: <i>Enterprise Funds Distribution</i>	21.021	6.037	3.057	2.378	0.000	2.378	1.481	0.743	0.757	0.771	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

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

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2018</u></b>	<b><u>FY 2019</u></b>	<b><u>FY 2020 Base</u></b>	<b><u>FY 2020 OCO</u></b>	<b><u>FY 2020 Total</u></b>
Previous President's Budget	6.266	3.173	2.378	-	2.378
Current President's Budget	6.037	3.057	2.378	-	2.378
Total Adjustments	-0.229	-0.116	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.229	-0.116			

**Change Summary Explanation**

The Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.229 million and \$0.116 million in FY2018 and FY2019 respectively.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
09: Enterprise Funds Distribution	21.021	6.037	3.057	2.378	0.000	2.378	1.481	0.743	0.757	0.771	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

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

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

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

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

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Enterprise Funds Distribution (EFD)	6.037	3.057	2.378
<b>Description:</b> EFD will distribute funds to the Military Departments and the Defense Agencies.			
<b>FY 2019 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>	<b>Project (Number/Name)</b> 09 / <i>Enterprise Funds Distribution</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<p>The program will continue the development and deployment of EFD Phase 2 requirements based on user group migration strategy as well as deploy user migration wave 2.</p> <p><b><i>FY 2020 Plans:</i></b>  The program will continue the development and deployment of EFD post Wave 2 requirements based on user group migration strategy. The program will also deploy additional accounts and development activities related to Momentum Software Baseline upgrade and deploy System Change Requests (SCR's) to support post deployment requirements.</p> <p><b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b>  FY2020 is lower due to the majority of EFD's development to be completed in FY2019.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	6.037	3.057	2.378

<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A	
<b>Remarks</b> n/a	

<b>D. Acquisition Strategy</b>	
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.	

<b>E. Performance Metrics</b>	
For performance, the objective is that 100% of the Standard Financial Information Structure (SFIS) elements are SFIS compliant at full development.	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Logistics Agency												Date: March 2019			
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)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Savantage Solutions	Option/FP	Savantage Solutions : Rockville, MD	14.158	0.000		0.000		-		-		-	0.000	14.158	14.158
TeraThink Corporation	C/FFP	TeraThink Corporation : Reston, VA	5.371	6.037	Dec 2017	3.057	Dec 2018	2.378	Dec 2019	-		2.378	Continuing	Continuing	Continuing
TBD	C/FFP	TBD : TBD	1.492	0.000		0.000		-		-		-	0.000	1.492	1.492
Prior Year Contracts	Option/Various	Multiple : Multiple	-	-		-		-		-		-	Continuing	Continuing	-
Subtotal			21.021	6.037		3.057		2.378		-		2.378	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 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			21.021	6.037		3.057		2.378		-		2.378	Continuing	Continuing	N/A
Remarks															



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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Logistics Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 09 / Enterprise Funds Distribution	

FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Enterprise Funds Distribution (EFD)																											
Enterprise Funds Distribution (EFD)																											

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / Defense Agencies Initiative (DAI) - Financial System
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	137.519	23.544	20.384	27.944	-	27.944	22.102	25.287	25.748	26.277	Continuing	Continuing
01: Defense Agencies Initiative - Financial System	137.519	23.544	20.384	27.944	-	27.944	22.102	25.287	25.748	26.277	Continuing	Continuing

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

**A. Mission Description and Budget Item Justification**

This program supports the Defense Agencies Initiative (DAI) Increments 2 and 3, Category I Defense Business Systems. Previous funding for DAI Increment 1, as well as FY2013 4th Quarter Increment 2, were documented in the Defense Enterprise Business Systems program element 50605070S00. Increment 3 will deliver new capabilities: Defense Working Capital Fund (DWCF) and Re-Sale accounting; and an application upgrade.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	24.436	21.156	23.673	-	23.673
Current President's Budget	23.544	20.384	27.944	-	27.944
Total Adjustments	-0.892	-0.772	4.271	-	4.271
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.892	-0.772			
• Program Increase	-	-	4.271	-	4.271

**Change Summary Explanation**

Small Business Innovation Research and Small Technology Transfer Research taxes amount to \$0.892 million and \$0.772 million in FY2018 and FY2019 respectively.

Program requirements for Increment 3 increased the FY2020 baseline.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
01: Defense Agencies Initiative - Financial System	137.519	23.544	20.384	27.944	-	27.944	22.102	25.287	25.748	26.277	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 0491												

**A. Mission Description and Budget Item Justification**

The DAI mission is to deliver auditable Chief Financial Officer (CFO) Act compliant business environments for Defense Agencies providing accurate, timely, authoritative financial data supporting the DoD goal of standardizing financial management practices improving financial decision support, and supporting audit readiness. Currently, Defense Agencies use several different non-compliant financial management systems supporting diverse operational functions and the warfighter in decision-making and financial reporting. These disparate, non-integrated systems do not meet statutory requirements to produce timely, auditable reports.

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

The DAI implementation approach is to deploy a standardized system solution that is consistent with requirements in the Federal Financial Management Improvement Act (FFMIA) and the DoD Business Enterprise Architecture (BEA), while leveraging the out-of-the-box capabilities of the selected Commercial-Off-the-Shelf (COTS) product, Oracle e-Business Suite (EBS), Release 12.2.6 (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).

DAI supports the FY 2018- FY 2022 National Defense Strategy (NDS Strategic Goal 3, "Reform the Department's Business Practices for Greater Performance and Affordability as well as Strategic Objectives 3.1 "Improve and Strengthen business operations through a move to DoD-Enterprise or shared services; reduce administrative and regulatory burden" as well as SO 3.3 Undergo an audit, and improve the quality of budgetary and financial information that is most valuable in managing the DoD.

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

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
<p>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).</p> <p>DAI is currently implemented at 23 Defense Agencies and the Office of the Under Secretary of Defense, Comptroller, (OUSD(C)). DAI supports over 62k personnel including, 45.6 thousand users. The program office is also responsible for operational sustainment of the system. Funds are required for additional government and contractor support, licenses, maintenance, and hardware to accomplish the remaining capability developments and organizational deployments, and initiate the annual Statement on Standards for Attestation Engagements No. 18 (SSAE 18) assertion packages. In 2017 and in 2018, the system received an unmodified SAE 18 report with no comments.</p> <p>The benefits of DAI are:</p> <ul style="list-style-type: none"> <li>• Labor efficiencies (entering data once) and shared across all business processes (modules), workflows and lifecycle in a modern system;</li> <li>• Reduction in contractor support;</li> <li>• Financial visibility (Access to real-time financial data transactions);</li> <li>• Enabling agility and resilience in execution (No silos – anyone/anywhere can backfill and work continues);</li> <li>• Retiring legacy systems;</li> <li>• 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.</li> <li>• Reducing reliance on custom Reports, Interfaces, Conversions, Extensions, Forms and Workflows by leveraging application upgrades</li> <li>• Enhanced Internal controls to ensure accurate data, regulatory compliance and ensuring segregation of duties</li> <li>• Significantly reduced data reconciliation requirements; and</li> <li>• Enhanced analysis and decision support capabilities.</li> </ul> <p>The DAI PMO also provides system integration services that include: acquisition/financial management, project management; blueprinting; design, build, and unit test; developing required Reports, Interfaces, Conversions, Extensions, Forms and Workflows (RICE-FW) objects; testing (cyber security/information assurance, integration, functional, performance, conversion, user acceptance, operational); end-user training (train the trainer/change management preparing the users for the cross functional skills and awareness needed to perform well with an integrated enterprise resource planning system); system deployment; conversion; information assurance; sustainment; data service; help desk support; as well as studies and analysis support.</p> <p>DLA Information Operations provides the program executive officer, program manager, and PMO staff. The DAI PMO relies on DLA Acquisition for most contracting. Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers (DECCs) provide application, development and test as well as Continuity of Operations (COOP) hosting, Technical Contracting Office for development task orders, and the Joint Interoperability Test Command for Interoperability testing. The DAI PMO serves as systems integrator. Contracted subject matter experts configure COTS to provide compliant business processes.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency			Date: March 2019		
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 2018	FY 2019	FY 2020
Title: Defense Agencies Initiative (DAI) - Financial System			23.544	20.384	27.944
FY 2019 Plans: In FY 2019, the DAI PMO will: <ul style="list-style-type: none"><li>• Field DAI Increment 3 Rel 1 General Fund (GF) accounting to users at a large agency (over 5,722 users).</li><li>• Development/Testing for DWCF and agency unique requirements and complete the study of 4th Estate common/core capabilities.</li><li>• Study Agency unique requirements for DeCA.</li><li>• Work instructions and training materials.</li><li>• Conduct an independent operational assessment (OA) of DAI INC 3, REL 1.</li><li>• Support the Financial Management (FM) &amp; time/labor operations for over 45k users at over 23 Agencies, Field Activities and organizations.</li><li>• Support the DoD RMF process to support actions included in the Designated Authorizing Authority required Plan of Actions and Milestones including an independent FISCAM Test of Design/Test of Effectiveness to result in a DAA decision to award an Authority to Operate.</li><li>• Continue to implement the GRC capabilities by expanding Enterprise controls: Configuration, Access, Prevention &amp; Transactions supporting audit findings, recommendations &amp; CAPs.</li><li>• Maintain the technical operation including: application of DISA Security Technical Implementation Guides, hardware &amp; software currency for servers operating systems, middleware &amp; applications including patches; overseeing internal processes within the DECC enclaves; &amp; the daily operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services.</li><li>• Conduct regular adversarial assessments, RMF continuous monitoring including code scans, an independent Cyber Economic Vulnerability Assessment and a Cooperative Vulnerability and Penetration Assessment.</li><li>• Obtain or maintain an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid.</li><li>• The Program will also perform developmental, operational and Cyber security testing with independent third parties under Office of the Secretary of Defense oversight. The Defense Logistics Agency will contract for an independent public accounting firm to conduct the annual FFMIA and SSAE 18 assessments and conduct Cyber security assessments on the system.</li></ul>					
FY 2020 Plans: In FY 2020, the DAI PMO will: <ul style="list-style-type: none"><li>• Field DAI Increment 3 Rel 2 DWCF accounting to users at a large agency (over 6k users).</li><li>• Development/Testing for DWCF and agency unique requirements and complete the study of 4th Estate common/core capabilities.</li><li>• Study Agency unique requirements for DeCA.</li><li>• Work instructions and training materials.</li></ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<ul style="list-style-type: none"> <li>• Conduct an independent operational assessment (OA) of DAI INC 3, REL 12.</li> <li>• Support the Financial Management (FM) &amp; time/labor operations for over 45k users at over 23 Agencies, Field Activities and organizations.</li> <li>• Support the DoD RMF process to support actions included in the Designated Authorizing Authority required Plan of Actions and Milestones including an independent FISCAM Test of Design/Test of Effectiveness to result in a DAA decision to award an Authority to Operate.</li> <li>• Continue to implement the GRC capabilities by expanding Enterprise controls: Configuration, Access, Prevention &amp; Transactions supporting audit findings, recommendations &amp; CAPs.</li> <li>• Maintain the technical operation including: application of DISA Security Technical Implementation Guides, hardware &amp; software currency for servers operating systems, middleware &amp; applications including patches; overseeing internal processes within the DECC enclaves; &amp; the daily operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services.</li> <li>• Conduct regular adversarial assessments, RMF continuous monitoring including code scans, an independent Cyber Economic Vulnerability Assessment and a Cooperative Vulnerability and Penetration Assessment.</li> <li>• Obtain or maintain an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid.</li> <li>• The Program will also perform developmental, operational and Cyber security testing with independent third parties under Office of the Secretary of Defense oversight. The Defense Logistics Agency will contract for an independent public accounting firm to conduct the annual FFMIA and SSAE 18 assessments and conduct Cyber security assessments on the system.</li> </ul> <p><b><i>FY 2019 to FY 2020 Increase/Decrease Statement:</i></b>  FY 2020 development will complete developing DWCF accounting requirements, necessary to serve as core and meet DeCA requirements. . FY 2020 development will focus on Re-Sale Accounting and any necessary DeCA, Joint Chiefs of Staff (JCS) and National Defense University (NDU) integrations or objects. In FY 2020, DAI will also prepare to deploy to DeCA, JCS and NDU.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>		23.544	20.384
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>Remarks</b>			
<b>D. Acquisition Strategy</b> DAI is being developed and implemented using an evolutionary/incremental strategy including major annual software releases to accommodate upgrades as required by changes to the Department's BEA including new laws, regulations and policies as governed by its Functional Sponsor.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
DAI Increments 1 and 2 are in sustainment. When Increment 3, Rel 1 went live in October 2018, it subsumed Increment 2; therefore, only one DAI production baseline exists at any point in time.		
<b>E. Performance Metrics</b>		
The following performance metrics will be performed on the DAI system:		
Functionality: Financial system performance. PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA in scope requirements for Defense Financial Management Improvement Guidance (DFMIG) and other laws regulations and policy. Objective: Substantial compliance.		
Program Conformance to BEA Processes, Data Standards, and Business Rules. The PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA. Objective: Substantial compliance.		
Net Ready Key Performance Parameter (NR-KPP)		
Attribute (Att) A - Support net-centric DoD military operations		
Mission: Transform the budget, finance, and accounting operations of the DoD Agencies to achieve accurate and reliable financial information in support of financial accountability and effective and efficient decision making throughout the Defense Agencies in support of the missions of the warfighter.		
A.1. Budget to Report (B2R). DAI provides General Ledger, Trial Balance, Budget Execution, and Financial Reporting Capabilities. DAI will measure the percentage of successful attempts to:		
* Generate and transmit Trial Balance Reports. Objective-95%;		
* Receive budget information from agency-specific systems, to support budget execution. Objective-95%; and		
* Generate and transmit reports to support period end processing procedures. Objective-95%;		
* Budget formulation with role-based authorizations and visibility. Objective-95%;		
* Generate and transmit budget documents including projects and tasks for reporting and for execution (spend plan). Objective-95%;		
* Import actuals to budget module and perform/save simulations. Objective-95%; and		
* Import projects and tasks as well as retain prior year budget execution and revisions. Objective-95%.		
A.2 Procure to Pay (P2P). DAI provides the capability to Order Materials and Services (Commitments), Record Purchases and Contract Information (Obligations) Pay Bills (Accounts Payable), and Create Ready to Pay File.		
DAI will measure the percentage of successful attempts to:		
* Exchange contract, obligation, receipt and invoice information with external systems to support procurement processes. Objective-95%;		
* Receive Purchase Card information from external systems to manage government purchase cards (P-Cards). Objective-95%;		
* Exchange data across agencies to support intergovernmental Purchase Request (PR) processes. Objective-95%;		
* Receive travel related data from external systems to support travel financial accounting events. Objective-95%; and		



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
<p>* Exchange miscellaneous payment information with trading partners. Objective-95%.</p> <p>* Send Ready to Pay files to Treasury for payment and record returned Treasury payment information. Objective-95%.</p> <p>A.3. Order to Cash (O2C). DAI provides the capability to Receive Customer Orders, Record Work Performed on the orders, Bill Customers, and Track Accounts Receivable.</p> <p>DAI will measure the percentage of successful attempts to:</p> <p>* Exchange data with external systems to support management of customer orders. Objective-95%;</p> <p>* Exchange receivables data with external systems. Objective-95%; and</p> <p>* Manage exchange collections data with external systems. Objective-95%.</p> <p>A.4. Acquire to Retire (A2R). DAI provides the capability to record Asset Acquisition, Depreciation, and Disposal. DAI will measure the percentage of successful attempts to:</p> <p>* Receive asset creation information from external systems. Objective-95%;</p> <p>* Accumulate and transmit costs incurred for Capital Assets on Construction in Progress (CIP) and Work in Progress (WIP) projects. Objective-95%;</p> <p>* Generate and transmit property accounting information. Objective-95%;</p> <p>* Receive property maintenance data from external systems. Objective-95%; and</p> <p>* Receive disposal of assets information from external systems. Objective-95%.</p> <p>* Send master data (cost center, projects and tasks) to external systems.</p> <p>* Record depreciation on the general ledger.</p> <p>A.5. Cost Management (formerly Cost Accounting). DAI provides Cost Accounting and Allocation Capabilities.</p> <p>DAI will measure the percentage of successful attempts to:</p> <p>* Receive Project Budgets from external systems. Objective-95%; and</p> <p>* Receive cost data to support cost collection processes. Objective-95%.</p> <p>A. 6. Hire to Retire (H2R). DAI provides Civilian, Military, and Contractor Time and Labor capabilities. DAI will measure the percentage of successful attempts to:</p> <p>* Exchange employee and timekeeping information with external systems. Objective-95%;</p> <p>* Process and send payroll data to external systems. Objective-95%; and</p> <p>* Automate leave request and authorizations integrated with timekeeping. Objective-95%.</p> <p>A.7. Budget Formulation</p> <p>* Store prior year budget execution data and any corresponding revisions.</p> <p>* Retrieve DWCF rate data to analyze and formulate the budget.</p> <p>* Store execution data for use with analyzing and formulating the budget.</p> <p>* Import projects and funds.</p> <p>* Support creation of required O&amp;M or RDTE exhibits.</p> <p>* Formulate each agency fund/project budget.</p> <p>* Create a spend plan for each fund/project as needed.</p> <p>* Formulate a report on any spend plan as needed.</p> <p>* Formulate price based on rates and base amounts.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
<ul style="list-style-type: none"> <li>* Calculate average annual rate (if not overridden), FTEs and civilian pay costs forecasts.</li> <li>* Import data from DAI financials as needed.</li> <li>* Provide comparison of multiple budget formulation scenarios.</li> <li>* Source object class hierarchy into budget formulation module.</li> <li>* Control and restrict data set access by role and agency security needs.</li> <li>* Allow users to change data, add justification text or comment, tag data with appropriate RMDs, and add documents to specific budget line items.</li> <li>* Retrieve data to analyze, formulate and establish revolving fund rates.</li> <li>* Provide civilian pay data to support the labor cost portions of fund/project budgets.</li> </ul> <p>A.8. Absence Management</p> <ul style="list-style-type: none"> <li>* Support automated leave request generation.</li> <li>* Workflow approval including associated notifications for leave requests.</li> <li>* Generate leave reports for supervisors.</li> </ul> <p>A.9 Grants Financial Management Accounting</p> <ul style="list-style-type: none"> <li>* Create/modify a grant award/purchase order.</li> <li>* Receive a grant and post to general ledger (GL).</li> <li>* Record grant advances/collections to GL.</li> <li>* Record grant disbursements to GL.</li> <li>* Automate funds availability for grants.</li> <li>* Update budget execution data from grants transactions.</li> </ul> <p>A.10. Direct Treasury Disbursing</p> <ul style="list-style-type: none"> <li>* Post ready to pay files</li> </ul> <p>NR-KPP Att B - Managed in the Network</p> <p>1) Type of Networks that are connected:</p> <ul style="list-style-type: none"> <li>- The DAI application supports multiple Defense Agencies, and thus is accessible from multiple network points. A typical user accesses the application via the web browser from his/her agency specific LAN/WAN and/or local site firewall configurations, traversing through the Non-Classified Internet Protocol Routing Network (NIPRNet) to reach the secure DAI application hosted within the DoD Demilitarized Zone (DMZ) which is controlled and managed by DISA.</li> <li>- The DAI production application is hosted in a DISA DECC environment located in Ogden, UT and is managed by DAI Program Management Office</li> </ul> <p>2) Measures of Performance (MOPs) to measure network entrance and management performance:</p> <p>a) Network related (DISA) – as per DISA Catalog of Services</p> <ul style="list-style-type: none"> <li>-Interactive Availability - Portion of network/system controlled by DISA CSD available to the partner during the interactive window</li> <li>-Batch Throughput – Completion rate and delivery by specified time during batch window specified in SLA</li> </ul> <p>b) Database related (DAI Program Management Office)</p> <ul style="list-style-type: none"> <li>-System Availability</li> <li>-On Line user system response</li> </ul>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
<p>3) Network Management:</p> <ul style="list-style-type: none"> <li>-The Agency (user) being supported is responsible for the communications infrastructure necessary for leaving their location to connect users to the NIPRNet</li> <li>-DISA is responsible for communications on NIPRNet between the end user and the main DAI environment</li> <li>-DAI Program Management Office is responsible for activities occurring within the application and the Oracle Database</li> </ul> <p>4) Systems Management</p> <ul style="list-style-type: none"> <li>-NIPRNet and Infrastructure - Centralized within DISA CSD</li> <li>-DAI System – centralized within DAI Program Management Office</li> </ul> <p>5) Network Configuration Parameters – N/A (within the realm of DISA management) DAI will measure the percentage of success for:</p> <ul style="list-style-type: none"> <li>* Supports secure Internet/NIPRNET access to solution. Interactive Availability. Objective-98.5%;</li> <li>* Supports secure Internet/NIPRNET access to solution. Batch Throughput. Objective-95%;</li> <li>* Provides adequate system response and availability to support operations. System Availability. (Condition: 5000 users/hour) Objective-95%; and</li> <li>* Provides adequate system response and availability to support operations. On-line system response. (Condition: 5000 users/hour) Objective-95%.</li> </ul> <p>NR-KPP Att C - Effectively Exchange Information.</p> <p>DAI will satisfy all top-level critical Information Exchange Requirements (IERs) with all required DoD Enterprise, DFAS, Defense Agencies, and Federal Systems, as documented in SV-6. There are 47 data exchanges with other systems. The objectives are 100% for accuracy and ten seconds to 1 day for timeliness. Additional details available upon request.</p> <p>Major Performers:</p> <p>CACI Enterprise Solutions, Inc. Chantilly, VA Global Model Implementation and Compliance Support to DAI</p> <p>CACI Enterprise Solutions, Inc. Chantilly, VA DAI Implementation Support Services</p> <p>CACI Enterprise Solutions, Inc. Chantilly, VA Infrastructure Support</p> <p>International Business Machines Corporation (IBM) Reston, VA DAI Global Model Development for Procure to Pay (P2P), Order to Cash (O2C), Budget to</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605080S / <i>Defense Agencies Initiative (DAI) - Financial System</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Agencies Initiative - Financial System</i>
<p>Retire (B2R), and Customer Application Development (CAD)</p> <p>CACI Inc Federal Chantilly, VA DAI Global Model Development for Acquire to Retire (A2R), Cost Accounting (CA), and Time and Labor (T&amp;L)</p> <p>Mythics, Inc DBA Virginia Beach, VA Oracle CLM and Purchase Software</p>		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2020 Defense Logistics Agency</b>												<b>Date: March 2019</b>			
<b>Appropriation/Budget Activity</b> 0400 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0605080S / Defense Agencies Initiative (DAI) - Financial System						<b>Project (Number/Name)</b> 01 / Defense Agencies Initiative - Financial System			
<b>Product Development (\$ in Millions)</b>				<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
DAI Compliance Support	Option/CPFF	CACI Inc Federal : Chantilly, VA	25.683	5.597	Jun 2018	0.000		5.854	Jun 2020	-		5.854	0.000	37.134	0.000
DAI Compliance Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		5.911	Jun 2019	0.000		-		0.000	Continuing	Continuing	Continuing
DAI Implementation Support	Option/CPAF	CACI Inc Federal : Chantilly, VA	22.251	6.151	Mar 2018	0.000		6.026	Mar 2020	-		6.026	0.000	34.428	0.000
DAI Implementation Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		6.336	Mar 2019	0.000		-		0.000	Continuing	Continuing	Continuing
DAI Infrastructure Support	Option/FFP	CACI ISS Inc : Fairfax, VA	11.655	2.821	May 2018	0.000		4.500	May 2020	-		4.500	0.000	18.976	0.000
DAI Infrastructure Support Follow-on	C/TBD	TBD : TBD	0.000	0.000		1.985	May 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Global Model P2P Follow-on	C/TBD	TBD : TBD	0.000	3.418	Aug 2018	0.000		3.908	Aug 2020	-		3.908	Continuing	Continuing	Continuing
Global Model A2R Follow-on	C/TBD	TBD : TBD	0.000	2.333	Apr 2018	2.403	Apr 2019	2.842	Apr 2020	-		2.842	Continuing	Continuing	Continuing
Requirements Management (RM) Support	MIPR	DISA : Fort Meade, MD	0.876	0.237	Oct 2018	0.159	Oct 2019	0.262	Oct 2020	-		0.262	Continuing	Continuing	Continuing
DCPDS/DAI Interface File Changes	MIPR	DLA Finance : Fort Belvoir, VA	0.014	0.013	Feb 2018	0.010	Feb 2019	0.008	Feb 2020	-		0.008	Continuing	Continuing	Continuing
Prior Year Contracts	Option/Various	MULTI : MULTI	54.057	-		-		-		-		-	0.000	54.057	54.057
<b>Subtotal</b>			114.536	20.570		16.804		23.400		-		23.400	Continuing	Continuing	N/A
<b>Remarks</b> Prior Year Contracts include: Global Model P2P C/FFP IBM: Bathesda, MD \$21.927 million; Global Model A2R C/CPFF CACI Inc Federal: Chantilly, VA \$10.146 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.															

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2020 Defense Logistics Agency</b>												<b>Date: March 2019</b>			
<b>Appropriation/Budget Activity</b> 0400 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0605080S / Defense Agencies Initiative (DAI) - Financial System						<b>Project (Number/Name)</b> 01 / Defense Agencies Initiative - Financial System			
<b>Support (\$ in Millions)</b>				<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Estimated SBIR/STTR:	TBD	TBD : TBD	1.112	0.892	May 2018	0.785	Jun 2019	0.864	Jun 2020	-		0.864	Continuing	Continuing	Continuing
<b>Subtotal</b>			1.112	0.892		0.785		0.864		-		0.864	Continuing	Continuing	N/A
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
DISA Hosting: Test and Development	MIPR	DISA : Pensacola, FL	12.938	-		0.894	Oct 2018	2.245	Oct 2019	-		2.245	Continuing	Continuing	Continuing
Interoperability	MIPR	JITC : Fort Meade, MD	3.407	0.281	May 2018	0.290	May 2019	0.222	May 2020	-		0.222	Continuing	Continuing	Continuing
Performance and Regression Testing	MIPR	JITC : Fort Huachuca, AZ	2.646	0.721	Oct 2017	0.600	Oct 2018	0.313	Oct 2019	-		0.313	Continuing	Continuing	Continuing
Operational Test and Evaluation	MIPR	JITC : Fort Huachuca, AZ	2.749	0.982	Dec 2017	1.011	Dec 2018	0.800	Dec 2019	-		0.800	Continuing	Continuing	Continuing
DCPS Testing	MIPR	DFAS : Indianapolis, IN	0.131	0.098	Oct 2017	0.000	Oct 2018	0.100	Oct 2019	-		0.100	Continuing	Continuing	Continuing
<b>Subtotal</b>			21.871	2.082		2.795		3.680		-		3.680	Continuing	Continuing	N/A
			<b>Prior Years</b>	<b>FY 2018</b>		<b>FY 2019</b>		<b>FY 2020 Base</b>		<b>FY 2020 OCO</b>		<b>FY 2020 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			137.519	23.544		20.384		27.944		-		27.944	Continuing	Continuing	N/A
<b>Remarks</b>															

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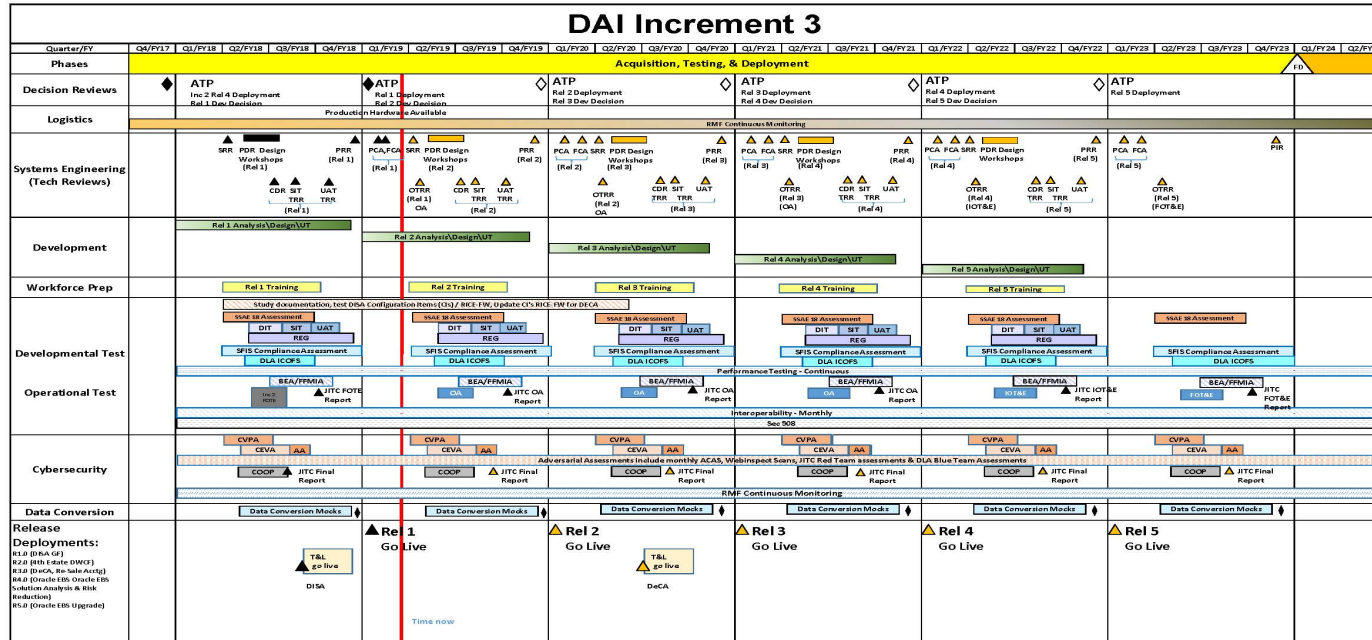
Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Logistics Agency

Date: March 2019

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



SDB: Section 508/Disability Test  
AA: Adversarial Assessment  
ACAS: Assured Compliance Assessment - Solution  
ATC: Authority to Operate (Includes Production & COOP)  
ATP: Authority to Proceed Decision Review  
BEAC: 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

DAU: Defense Acquisition University  
DCAA: Defense Contract Audit Agency  
DCFO: Deputy Chief Financial Officer  
DCMA: Defense Contract Management Agency  
DHRA: Defense Human Resources Activity  
DMLA: Defense Microelectronics Activity  
DODIG: DoD Inspector General  
DOT&E: Director Operational Test & Development  
DSCA: Defense Security Cooperation Agency  
DT: Development Test

DIT: Developmental Integration Test  
DWCF: Defense Working Capital Fund  
FCA: Functional Configuration Audit  
FD: Full Deployment  
FF: Full Financials  
FFMMA: Federal Financial Management Information Act  
FOT&E: Follow-on Operational Test & Evaluation  
GRC: Governance, Risk and Compliance  
IA: Information Assurance  
ICOPS: Internal Controls over Financial Systems  
IOT&E: Initial Operational Test & Evaluation  
JITC: Joint Interoperability Test Command

MS: Milestone  
OA: Operational Test Authority  
OTA: Operational Test Authority  
OTRE: Operational Test Review  
P2P: Procure to Pay  
PCA: Physical Configuration Audit  
PDR: Preliminary Design Review  
PERF: Performance Test  
PIR: Post Implementation Review  
PROD: Production  
R: Release  
RI2: Oracle E-Business Suite, Release 12  
REG: Regression Test

RMF: Risk Management Framework  
SPS-CA: Standard Financial Information Structure - Compliance Assessment  
SIT: Systems Integration Test  
SOD: Segregation of Duties  
SRP: Software Requirements Review  
SSAIC: Statement of Standards for an Attestation Engagement  
Std: Standards  
T&D: Test and Development  
T&L: Time & Labor  
TRR: Test Readiness Review  
UAT: User Acceptance Testing

USSQL: United States Standard General Ledger  
UT: Unit Test  
WHS: Washington Headquarters Service

**Updated December 12, 2018**

\*Note: WHS deployment includes OSD Secretariat of Rums, Pentagon Force Protection Agency, Defense Test Resource Management Center (DTRMC), Defense Legal Services Agency (DLSA) & US Court of Appeals for Armed Services.

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Logistics Agency		Date: March 2019
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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Defense Agencies Initiative (DAI)				
Defense Agencies Initiative (DAI)	1	2011	4	2024



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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Defense Logistics Agency **Date:** March 2019

<b>Appropriation/Budget Activity</b>					<b>R-1 Program Element (Number/Name)</b>							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	32.583	12.983	10.339	6.609	-	6.609	1.763	1.800	1.833	1.872	Continuing	Continuing
01: Defense Retired and Annuitant Pay System (DRAS)	32.583	12.983	10.339	6.609	-	6.609	1.763	1.800	1.833	1.872	Continuing	Continuing

## A. Mission Description and Budget Item Justification

Defense Retired and Annuitant Pay System 2 (DRAS2) replaces the Defense Retiree and Annuitant Pay System (DRAS) and selected manual processes with proven state of the market technology under program element 50605070S00. DRAS2 will streamline processes and provide auditable, sustainable and flexible retiree and annuitant pay capability to meet user's needs.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	13.475	10.731	6.609	-	6.609
Current President's Budget	12.983	10.339	6.609	-	6.609
Total Adjustments	-0.492	-0.392	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.492	-0.392			

## Change Summary Explanation

The Small Business Innovation Research and Small Technology Transfer Research taxes were \$0.492 million and \$0.392 million in FY2018 and FY2019 respectively.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)				Project (Number/Name) 01 / Defense Retired and Annuitant Pay System (DRAS)			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
01: Defense Retired and Annuitant Pay System (DRAS)	32.583	12.983	10.339	6.609	-	6.609	1.763	1.800	1.833	1.872	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The primary objective of DRAS 2 is to establish and maintain a modernized retired military pay accounts. DRAS2 replaces the Defense Retiree and Annuitant Pay System (DRAS) and selected manual processes with proven state of the market technology under program element 50605070S00. This modernization will allow for the consolidation of disparate DRAS systems and business processes, the reduction of system redundancies and inefficiencies, and increased customer satisfaction.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Defense Retired and Annuitant Pay System (DRAS) 2									12.983	10.339	6.609	
FY 2019 Plans: DRAS2 will complete development in FY2020 versus FY2019 as previously planned then enter formal testing the same year. This change represents a three (3) month delay.												
DRAS2 was approved as an NDAA 2018, Sec 873 Agile Pilot program in FY2019 as a measure to reduce technical risk.												
FY 2020 Plans: DRAS2 formal testing will begin in early FY2020 and is scheduled to conclude in early FY2021. Data migration to begin from the legacy DRAS to the new DRAS2 system. DRAS2 anticipates that the additional data migration may extend the schedule.												
FY 2019 to FY 2020 Increase/Decrease Statement: DRAS2 requirements will increase in FY2019 and FY2020 to accommodate data migration requirements.												
Accomplishments/Planned Programs Subtotals									12.983	10.339	6.609	
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												
D. Acquisition Strategy												
DRAS2 achieved Milestone B in August 2016 and entered into the Engineering, Development, and Production Phase of the Acquisition Lifecycle. DRAS2 achieved a successful Critical Design Review in December 2017 and is now in System Development. DRAS2 has been Accepted for the Agile Pilot sec. 873 program by OSD and has successfully begun Agile development.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>	<b>Project (Number/Name)</b> 01 / <i>Defense Retired and Annuitant Pay System (DRAS)</i>
<b><u>E. Performance Metrics</u></b> N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Logistics Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)				Project (Number/Name) 01 / Defense Retired and Annuitant Pay System (DRAS)					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DRAS2 System Development and Integration	Option/ IDIQ	CSRA : Chantilly, VA	13.096	10.314	Jan 2018	4.505	Oct 2018	3.664	Oct 2019	0.000		3.664	Continuing	Continuing	Continuing
DRAS2 COTS License Purchase	Option/ IDIQ	CSRA/Oracle : To be Determined	14.029	0.000		0.000		0.000		0.000		0.000	Continuing	Continuing	14.110
DISA Hosting	MIPR	Virtual Operating Environment : Mechanicsburg, PA	1.053	0.716	Jan 2018	0.000	Jan 2019	0.000		0.000		0.000	Continuing	Continuing	2.590
Transaction Services Interface Design	Option/ IDIQ	Northrop Grumman DLA Transaction Services : Chambersburg, PA	3.750	0.452	Nov 2017	0.000		0.000		0.000		0.000	Continuing	Continuing	4.162
Transaction Services Interface Development & Testing	Option/ IDDQ	Northrop Grumman DLA Transaction Services : Chambersburg, PA	0.655	0.699	Jul 2018	0.720	Jul 2019	0.436	Jul 2020	0.000		0.436	Continuing	Continuing	1.910
DRAS2 System Development & Integration	Option/ IDIQ	CSRA : Chantilly, VA	0.000	0.802	May 2018	2.162	Feb 2019	0.000	Feb 2020	0.000		0.000	Continuing	Continuing	6.643
Interoperability Testing	MIPR	Joint Interoperability Test Command (JITC) : Fort Meade, MD	0.000	0.000		1.542	Oct 2018	1.313	Oct 2019	0.000		1.313	Continuing	Continuing	1.900
Training Effort	C/TBD	To be determined : To be determined	0.000	0.000		1.410	Jun 2019	1.196	Jun 2020	-		1.196	Continuing	Continuing	2.196
Subtotal			32.583	12.983		10.339		6.609		0.000		6.609	Continuing	Continuing	N/A
Remarks															
DRAS2 is planning for a separate Training effort, allowing for concurrent efforts to be focused on Development, Testing, and Training.															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			32.583	12.983		10.339		6.609		0.000		6.609	Continuing	Continuing	N/A

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2020 Defense Logistics Agency							<b>Date:</b> March 2019		
<b>Appropriation/Budget Activity</b> 0400 / 5			<b>R-1 Program Element (Number/Name)</b> PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>			<b>Project (Number/Name)</b> 01 / <i>Defense Retired and Annuitant Pay System (DRAS)</i>			
	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Remarks</b>									

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Logistics Agency

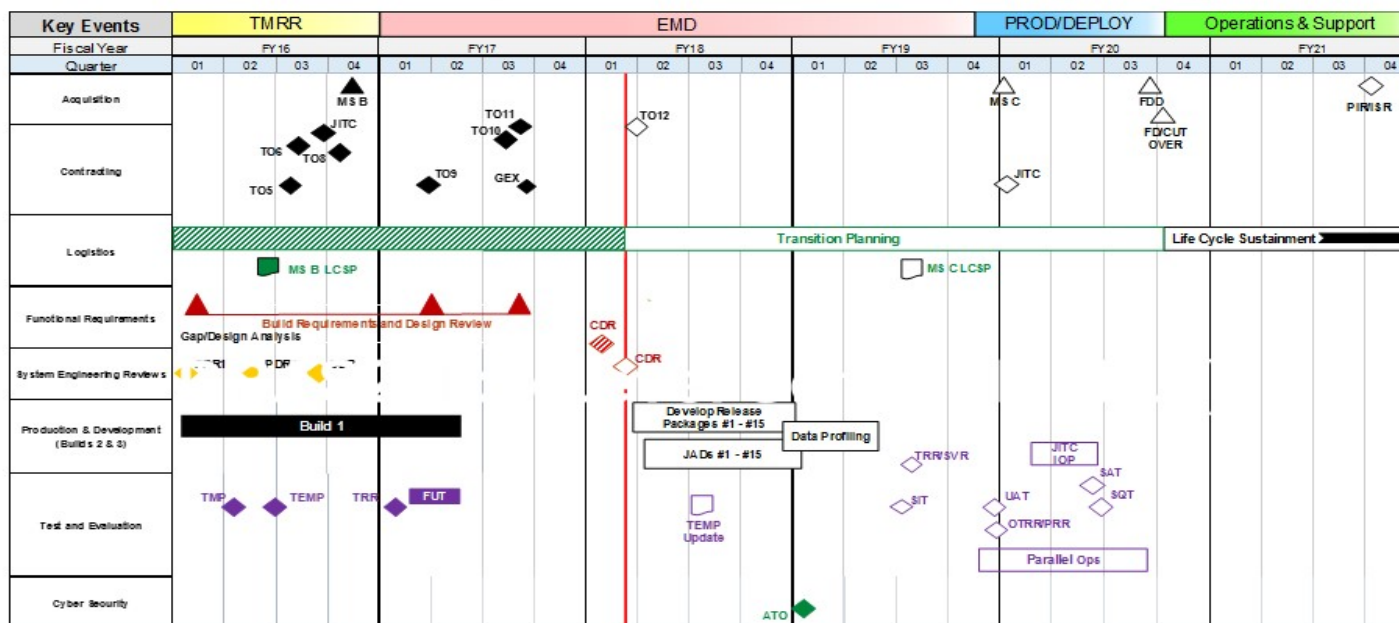
Date: March 2019

Appropriation/Budget Activity  
0400 / 5

R-1 Program Element (Number/Name)  
PE 0605090S / Defense Retired and  
Annuitant Pay System (DRAS)

Project (Number/Name)  
01 / Defense Retired and Annuitant Pay  
System (DRAS)

## DRAS2 Top Level Schedule (TLS)



**Note:** The IMS is currently being mitigated for PM approval based on DLA Contracts Office guidance pertaining to IDIQ contract limitations during FY19 & FY20. Milestone C and Full Deployment dates reflected are tentative.

- △ Milestone Decision
- ◇ Decision Point
- ◆ Completed
- Task Timeline (Planned)
- ▨ Partial Progress Indicator
- Document Review

MS B – Milestone B MS C – Milestone C FD – Full Deployment IATT – Interim Authority To Test ATO/ATC – Authority To Operate/Authority to Connect TMRR – Technology Maturation and Risk Reduction EMD – Engineering and Manufacturing Development PROD/DEPLOY – Production and Deployment Development SI – System Integrator TO – Task Order SRR – System Requirements Review SFR – System Functional Review PDR – Preliminary Design Review CDR – Critical Design Review T-PDR Tailored Preliminary Design Review T-CDR Tailored Critical Design Review (Build 1 – 3) OTRR – Operational Test Readiness Review PRR – Production Readiness Review ISR – In Service Review SEP – System Engineering Plan TMP – Test Management Plan TEMP – Test & Evaluation Master Plan SAT – System Acceptance Testing SIT – System Integration Testing TRR – Technology Readiness Review SVR – System Verification Review SQT – System Qualification Testing UAT – User Acceptance Testing DTE – Developmental Test & Evaluation (SwQT) – Software Quality Testing – Regression, System Integration, Compliance and Functional User Testing JITC – Joint Interoperability Test Command Proto CRP – Prototype Conference Room Pilot 2, 4, 6

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2020 Defense Logistics Agency **Date:** March 2019

<b>Appropriation/Budget Activity</b>					<b>R-1 Program Element (Number/Name)</b>							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					PE 0605502S / Small Business Innovative Research (SBIR)							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	27.597	11.631	10.454	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
SBIR: Small Business Innovative Research	27.597	11.631	10.454	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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	11.631	10.454	0.000	-	0.000
Total Adjustments	11.631	10.454	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	11.631	10.454			

**Change Summary Explanation**

FY2018 and FY2019 Small Business Innovation Research (SBIR) and Small Technology Transfer (STTR) taxes for DLA programs establish the baseline for this program element. DLA SBIR/STTR taxes include \$3.695 million and \$4.449 million in FY2018 and FY2019 respectively. In addition, Defense Microelectronics Agency (DMEA) funds include \$7.936 million and \$6.005 million for FY2018 and FY2019 respectively.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502S / Small Business Innovative Research (SBIR)				Project (Number/Name) SBIR / Small Business Innovative Research			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
SBIR: Small Business Innovative Research	27.597	11.631	10.454	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This program explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies with a defense application as well as a commercial value. The SBIR and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future DLA operational and sustainment requirements. Dual-use means the technologies will be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new DLA technologies, and as a route to national economic growth through new commercial products. DLA will conduct the competition as well as award and manage the contracts.

The DLA's SBIR/STTR investments are divided into multiple Research Areas identified from within several DLA Elements:

### J6 R&D

- Nuclear Enterprise Support Office (NESO) Alternative Sources of Supply
- Additive Manufacturing Technologies, Process Controls, and Supply Chain
- Advanced Battery Manufacturing
- Advanced Aircraft Braking Systems
- Anti-Counterfeiting Technologies
- Medical 3D Printing of Prosthetics
- Seamless Self Sealing Fuel Bladders and Inflatables
- Strategic Materials Rare Earth Element Source Development
- Warehouse Modernization Technologies
- Subsistence Supply Chain Solutions
- Land & Maritime (L&M) Alternative Sources of Supply
- US Navy LCAC Power Supply Source Development
- US Air Force F-107 Engine Replacement Parts Source Development

### DMEA

- Advanced microelectronics concepts, technologies, and applications



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019	
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>	<b>Project (Number/Name)</b> SBIR / <i>Small Business Innovative Research</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> SBIR Accomplishments/Plans  <b>FY 2019 Plans:</b> 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 within 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.  DMEA SBIR/STTR: DMEA will continue to seek innovative technical solutions to DoD microelectronics research and development needs and increase private-sector commercialization of these innovations.  <b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> SBIR and STTR tax amounts are based on enacted budgets so FY2020 amounts have not been established.		11.631	10.454
<b>Accomplishments/Planned Programs Subtotals</b>		11.631	10.454
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b> N/A			
<b>D. Acquisition Strategy</b> 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)			
<b>E. Performance Metrics</b> SBIR /STTR programs measure performance in two separate metrics:  1. Phase Progression: In terms of progression from Phase I to Phase II to Phase III, DLA deems each successive progression success. DLA seeks to have a 30% progression from one Phase to the next as a minimum.  2. Commercialization: The Congressional language defines "Commercialization," which is clarified by the Office of Secretary of Defense Office of Small Business Programs (OSD/OSBP) Re-Authorization Policy Directive: - (Investment) The process of developing products, processes, technologies, or services; and/or			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019
<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>	<b>Project (Number/Name)</b> SBIR / <i>Small Business Innovative Research</i>
<p>- (Sales) The production and delivery (whether by the originating party or by others) of products, processes, technologies, or services for sale to or use by the Federal Government or commercial markets</p> <p>The Small Business Administration and OSD/OSBP assign a Commercialization Index based on progression within the Phases and reported successes.</p>		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					<b>R-1 Program Element (Number/Name)</b> PE 0606942S / Cyber Vulnerability Assessment and Mitigation							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	3.854	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.854
CVAM: Cyber Vulnerability Assessment and Mitigation	0.000	0.000	3.854	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.854

**A. Mission Description and Budget Item Justification**

In section 1650 of Public Law 114-328, the National Defense Authorization Act (NDAA) for FY2017, the Congress mandated that the Department of Defense (DoD) conduct cyber vulnerability evaluations of critical military installations by December 31, 2019. The funding provided is for critical infrastructure assessments and mitigations. The Cyber Vulnerability Assessment and Mitigation program continues the cyber hardening of critical infrastructure for the Defense Logistics Agency (DLA) Fuel Distribution by conducting cyber vulnerability assessments of current fuel distribution infrastructures.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	0.000	4.000	0.000	-	0.000
Current President's Budget	0.000	3.854	0.000	-	0.000
Total Adjustments	0.000	-0.146	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-0.146			

**Change Summary Explanation**

This is a new PE in FY 2019. This is a continuation of efforts funded within the management support for the Office of the Secretary of Defense PE 0604942D8Z Assessments and Evaluation. IN FY2019, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.146 million.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency										<b>Date:</b> March 2019		
<b>Appropriation/Budget Activity</b> 0400 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0606942S / <i>Cyber Vulnerability Assessment and Mitigation</i>				<b>Project (Number/Name)</b> CVAM / <i>Cyber Vulnerability Assessment and Mitigation</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
CVAM: <i>Cyber Vulnerability Assessment and Mitigation</i>	0.000	0.000	3.854	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.854
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**  
 In section 1650 of Public Law 114-328, the National Defense Authorization Act (NDAA) for FY2017, the Congress mandated that the Department of Defense (DoD) conduct cyber vulnerability evaluations of critical military installations by December 31, 2019. The funding provided is for critical infrastructure assessments and mitigations. The Cyber Vulnerability Assessment and Mitigation program continues the cyber hardening of critical infrastructure for the Defense Logistics Agency (DLA) Fuel Distribution by conducting cyber vulnerability assessments of current fuel distribution infrastructures.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Cyber Vulnerability Assessment and Mitigation  <b>FY 2019 Plans:</b> Conduct cyber vulnerability assessments and mitigation on existing DLA Fuel Distribution Infrastructure.  <b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> Program is established within DLA's RDT&E portfolio in FY2019.	-	3.854	-
<b>Accomplishments/Planned Programs Subtotals</b>	-	3.854	-

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

**Remarks**

**D. Acquisition Strategy**  
 N/A

**E. Performance Metrics**  
 Vulnerabilities that are discovered through fuel distribution infrastructure assessments will have corrective action plans (CAPs) drawn up and mitigation efforts to close gaps will be initiated. 20% of CAPs will be closed within 1 year of discovery.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					<b>R-1 Program Element (Number/Name)</b> PE 0708012S / <i>Pacific Disaster Center</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	7.493	1.705	1.705	1.770	-	1.770	1.785	1.821	1.856	1.889	Continuing	Continuing
03: <i>Pacific Disaster Center</i>	7.493	1.705	1.705	1.770	0.000	1.770	1.785	1.821	1.856	1.889	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA). The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC develops new and innovative technologies to operate an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	1.770	1.770	1.770	-	1.770
Current President's Budget	1.705	1.705	1.770	-	1.770
Total Adjustments	-0.065	-0.065	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.065	-0.065			

**Change Summary Explanation**

FY2018 and FY2019, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to \$0.065 million.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
03: Pacific Disaster Center	7.493	1.705	1.705	1.770	0.000	1.770	1.785	1.821	1.856	1.889	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the OUSD(AT&L) and the DLA. The PDC is a world-recognized authority and leader in science and information technology applications relating to Humanitarian Assistance and Disaster Relief (HA/DR). It has developed innovative technologies, and has provided operational support for an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department since 2007. The system, covering global hazard is frequently used by COCOMS, particularly PACOM and SOUTHCOM, for HA/DR missions and exercises, and was recently selected as one of the most effective systems in a position paper by the department, reviewing all unclassified information sharing systems. "Expanded use of RAPIDS across the DoD at the Combatant Commands, Joint Task Force, and by deployed units from the services" was identified as "a primary Joint Staff objective" in a memorandum dated July 6, 2017.

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

	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
<b>Title:</b> Pacific Disaster Center (PDC)	1.705	1.705	1.770
<p><b>Description:</b> This program is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress. The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. USD(AT&amp;L) will provide acquisition oversight authority for the program.</p> <p>The PDC has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. The Pacific Disaster Center (PDC) function, manpower, and budget resources transferred to the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&amp;L)) and the Defense Logistics Agency (DLA) in October 2011.</p> <p>The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC's applications and information products enhance preparedness, situational awareness, and civil-military communications for humanitarian missions worldwide, while its national-level socio-economic Risk and Vulnerability Assessments help inform strategies by measuring indicators for national resiliency using scientific methods.</p> <p>The PDC Program Office's (USD(P), ASD(HD&amp;GS), and DASD(DC&amp;MA)) primary responsibility is for management and stewardship of governmental funds provided in Defense Department appropriations for DoD missions associated with DoD CrM, HA/DR, Theater Security Cooperation, and Defense Support to Civil Authorities (DSCA). In doing this, the Program Office</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency			Date: March 2019		
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 2018	FY 2019	FY 2020
<p>develops and provides policy, oversight and guidance, and jointly develops strategic guidelines, programmatic content and priorities with the UH and PDC. The PDC Program Office also serves as a support element of the Hawaii-based organization especially in the area of gaining Federal agency support and resources, as well as business opportunities.</p> <p><b>FY 2019 Plans:</b> Risk and Vulnerability Assessment</p> <ul style="list-style-type: none"><li>• Collaborate with regional Combatant Commands (e.g., SOUTHCOM, PACOM, etc.) to integrate and visualize subnational RVA data into RAPIDS</li><li>• Improve sub-national analytical reporting/visualization and automated assessment capabilities</li></ul> <p>Data</p> <ul style="list-style-type: none"><li>• Explore new technologies for handling “big data”</li><li>• Improve analytical capabilities using “big data”, including use of social media for early detection of man-made hazards</li><li>• Continue development of data sources for hazards and related observational data TBD</li></ul> <p>Modeling</p> <ul style="list-style-type: none"><li>• Integrate Global Exposure Model for high-resolution “impact and exposure” analytical reporting</li><li>• Continue enhancing application of hazard models to estimate initial needs for HA/DR support missions</li></ul> <p>Application</p> <ul style="list-style-type: none"><li>• Expand use and visualization of “big data”, supporting higher-resolution baseline inventories</li><li>• Improve cross-device user experience (e.g., desktop, mobile tablets, smart phones, wearables, etc.)</li><li>• Integrate mass (alert) notification functions</li><li>• Continue evaluating new and innovative technologies for enhancing user experience (for RAPIDS)</li></ul> <p><b>FY 2020 Plans:</b> Continue FY2019 operations.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> No significant change.</p>					
Accomplishments/Planned Programs Subtotals			1.705	1.705	1.770
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Center</i>	Project (Number/Name) 03 / <i>Pacific Disaster Center</i>
<p><b>D. Acquisition Strategy</b></p> <p>PDC projects beyond the baseline Situational Awareness &amp; Decision Support Applications/Tools architecture (Atlas/EMOPS/RAPIDS) undertaken in support of the DoD Cooperative Agreement (CA) with the University of Hawaii (UH) are from PDC customers (e.g., DoD, NGOs, other nations, academia, and industry). The PDC prepares the public, disaster managers, governments, and others to mitigate the effects of disasters. The goal is to have people and technology work together to preserve life, safeguard livelihoods, protect property to foster disaster-resilient communicates. Projects obtained and funded from this customer base serve as a means to determine PDC product and services relevancy.</p> <p><b>E. Performance Metrics</b></p> <p>Projects objectives and tasks are designed to build upon the previous year's successes and are consistent with the framework and direction provided by the Strategies 2016-2020 document (updated Nov 2016). At the beginning of each calendar year, an Annual Plan is in-place to guide the program and enable a framework for performance feedback to the DoD PDC Program Manager, the PDC Executive Director, WHS CA Contracting Office, and the UH. At the end of each calendar year, these stakeholders meet to review the past year performance and finalize a new Annual Plan for the next calendar year. This plan details a set of specific objectives to further capabilities and capacities supporting the PDC's mission and increasing operational value to the stakeholders.</p>		



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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Logistics Agency												Date: March 2019			
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)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PDC Disaster AWARE: Early Warning and Decision Support Applications	MIPR	University of Hawaii Systems : Honolulu, HI	7.493	1.705	Mar 2018	1.705	Mar 2019	1.770	Dec 2019	0.000		1.770	Continuing	Continuing	Continuing
Subtotal			7.493	1.705		1.705		1.770		0.000		1.770	Continuing	Continuing	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.493	1.705		1.705		1.770		0.000		1.770	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Logistics Agency			Date: March 2019
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Center	Project (Number/Name) 03 / Pacific Disaster Center	

FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PDC																											
PDC																											

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Logistics Agency	<b>Date:</b> March 2019
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<b>Appropriation/Budget Activity</b> 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	<b>R-1 Program Element (Number/Name)</b> PE 0708047S / Defense Property Accountability System (DPAS)
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COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	2.075	2.817	1.739	3.679	-	3.679	3.489	3.096	3.152	3.219	Continuing	Continuing
ABC: DPAS	2.075	2.817	1.739	3.679	0.000	3.679	3.489	3.096	3.152	3.219	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

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

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020 Base</b>	<b>FY 2020 OCO</b>	<b>FY 2020 Total</b>
Previous President's Budget	2.924	1.805	3.679	-	3.679
Current President's Budget	2.817	1.739	3.679	-	3.679
Total Adjustments	-0.107	-0.066	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.107	-0.066			

**Change Summary Explanation**

The Small Business Innovation Research and Small Technology Transfer Research taxes for FY2018 and FY2019 were \$0.107 million and \$0.066 million respectively.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Logistics Agency										Date: March 2019		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)				Project (Number/Name) ABC / DPAS			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
ABC: DPAS	2.075	2.817	1.739	3.679	0.000	3.679	3.489	3.096	3.152	3.219	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 operability, and provide solutions for process gaps as they are discovered. The greater enhancements to DPAS allow the DoD to sunset legacy systems; DPAS assimilates the legacy functionality into the overall operations.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Release DPAS v 7									2.817	1.739	-	
Description: DPAS will create processes to permit the creation of Allowance Standards and compute Unit Requisition lists based on Allowances versus On Hand Balances and improve the identification of Assets Due In by creating an interface with Electronic Document Access to retrieve Contract CLINS, Quantities and Costs.												
FY 2019 Plans:												
DPAS will create processes to support the Air Force Allowance Standard processes. This will entail master tables to maintain standardized data elements, program names, Unit Type, Unit Identification and several others. Using these master table settings the user will then be able to create Allowance Standards for each Program and Unit Type. Processes will be created for the Units to identify additional parameters that will then combine the Allowance Standards and these user parameters to generate the Units Authorized Quantity Levels. The final process will use the DoD Standard methodology of identifying priorities to compare the On Hand Balances to the Authorized Quantities and produce Requisitioning Lists for the units to fulfill their asset requirements.												
DPAS will retrieve Contract Numbers, CLINS, Quantity and Price from Electronic Document Access to create Due In/Pending transactions in DPAS to provide the Property Management Personnel oversight of assets expected for delivery. These transactions will match to IRAPT transactions as the assets are shipped/received.												
DPAS will continue to provide support for the Financial Audit. The Department will have completed the first full audit and have findings that must be addressed. DPAS will work with each Service or Agency to determine the areas that DPAS can increase capability to permit the findings to be closed. At this time it is difficult to specifically state what these capabilities may be but DPAS is used by all components of the Department so there are sure to be areas that DPAS can implement capabilities to permit the Components to address the findings												
FY 2019 to FY 2020 Increase/Decrease Statement:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Logistics Agency		<b>Date:</b> March 2019		
<b>Appropriation/Budget Activity</b> 0400 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0708047S / <i>Defense Property Accountability System (DPAS)</i>	<b>Project (Number/Name)</b> ABC / DPAS		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>
DPAS v7 release will be completed in FY2019. In FY2020, DPAS v8 development will begin resulting in an increase from FY2019 to FY2020.				
<b>Title:</b> DPAS v 8 Development		-	-	3.679
<b>Description:</b> Version 8 will contain the processes to produce accounting transactions for equipment assets from the warehouse portion of the system, to 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.				
<b>FY 2020 Plans:</b> The creation of interfaces for additional Army systems to report all Maintenance Actions, request of new National Stock Numbers and the Logistics Product Data Store.				
DPAS will continue to provide support for the Financial Audit. DPAS will work with each Service or Agency to determine the areas that DPAS can increase capability to permit the findings to be closed. At this time it is difficult to specifically state what these capabilities may be but DPAS is used by all components of the Department so there are sure to be areas that DPAS can implement capabilities to permit the Components to address the findings.				
<b>FY 2019 to FY 2020 Increase/Decrease Statement:</b> In FY2020, development will begin resulting in an increase from FY2019 to FY2020.				
<b>Accomplishments/Planned Programs Subtotals</b>		2.817	1.739	3.679
<b>C. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>D. Acquisition Strategy</b>				
N/A				
<b>E. Performance Metrics</b>				
DPAS successfully and timely adds functionality based on user requirements to meet the Department's audit readiness and property accountability requirements.				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Logistics Agency												Date: March 2019			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)				Project (Number/Name) ABC / DPAS					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DPAS Version 7 Development	C/CPIF	Leidos Inc : Camp Hill PA	2.075	2.817	Jun 2018	1.739	Jun 2019	0.000		0.000		0.000	0.000	6.631	6.631
DPAS Version 8 Development	C/FFP	Contractor TBD : TBD	0.000	0.000		0.000		3.679	Jun 2020	0.000		3.679	Continuing	Continuing	N/A
Subtotal			2.075	2.817		1.739		3.679		0.000		3.679	Continuing	Continuing	N/A
Remarks															
Funding was reduced by 1.142M in FY2019 and increased by half the amount of the decrease in FY2020.															
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.075	2.817		1.739		3.679		0.000		3.679	Continuing	Continuing	N/A
Remarks															

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**Exhibit R-4, RDT&E Schedule Profile:** PB 2020 Defense Logistics Agency

**Date:** March 2019

**Appropriation/Budget Activity**

0400 / 7

**R-1 Program Element (Number/Name)**

PE 0708047S / *Defense Property Accountability System (DPAS)*

**Project (Number/Name)**

ABC / DPAS

Fiscal Year	FY2016				FY2017				FY2018				FY2019				FY2020				
Project Task	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Research																					
Design																					
Development																					
Testing																					
Implementation																					
Research																					
Design																					
Development																					
Testing																					
Implementation																					
Research																					
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Testing																					
Implementation																					

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