Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Defense Logistics Agency											Date: February 2020	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603712S / *Logistics Research and Development Technology (Log R&D)*							
COST ($ in Millions)	**Prior Years**	**FY 2019**	**FY 2020**	**FY 2021 Base**	**FY 2021 OCO**	**FY 2021 Total**	**FY 2022**	**FY 2023**	**FY 2024**	**FY 2025**	**Cost To Complete**	**Total Cost**
Total Program Element	45.739	18.127	16.620	10.235	-	10.235	10.355	10.679	10.920	11.171	Continuing	Continuing
EMM: *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*	8.754	3.758	2.075	2.729	-	2.729	2.775	2.886	2.900	2.970	Continuing	Continuing
GLTD: *Improving Logistics Processes (formerly Logistics Process)*	19.502	3.568	2.588	4.044	-	4.044	4.114	4.258	4.277	4.376	Continuing	Continuing
04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	17.483	10.801	11.957	3.462	-	3.462	3.466	3.535	3.743	3.825	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. DLAs Logistics Research and Development (Log R&D) program helps ensure that advanced logistics concepts and business processes are used to accomplish the agency's mission with the leanest possible infrastructure. Log R&D identifies the best commercial business practices and tailors them, as necessary, into the most effective business processes for the agency. 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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Defense Logistics Agency	Date: February 2020
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603712S *I Logistics Research and Development Technology (Log R&D)*

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

B. Program Change Summary ($ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	18.127	10.817	10.998	-	10.998
Current President's Budget	18.127	16.620	10.235	-	10.235
Total Adjustments	0.000	5.803	-0.763	-	-0.763
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.600			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-0.597			
• Defense Wide Review Reduction	-	-	-0.583	-	-0.583
• Inflation for Civilian Pay	-	-	0.017	-	0.017
• Inflation for Non-Pay/Non-Fuel Purchases	-	-	-0.010	-	-0.010
• Internal Realignment	-	-	-0.187	-	-0.187

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2019	FY 2020
Project: 04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*		
Congressional Add: *Energy Readiness Program for Liquid Hydrocarbon Fuels*	7.000	10.000
Congressional Add Subtotals for Project: 04	7.000	10.000
Congressional Add Totals for all Projects	7.000	10.000

Change Summary Explanation

FY2020, $3.600 million reduction OSD Enacted FY2020 adjustments due to prior year carryover.
FY2020, $10.000 million Congressional Addition for program increase steel performance initiative in Castings.
FY2020, the Small Business Innovation Research and Small Technology Transfer Research tax amounted to $0.597 million.
FY2021, internal realignment decreased program baseline by $0.186 million for critical Defense Property Accountability System redesign and upgrade requirements.
The FY 2021 funding request was reduced by $0.583 million during the Defense-Wide Review to free up resources for higher priority Department needs.

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency			Date: February 2020
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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
EMM: *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*	8.754	3.758	2.075	2.729	-	2.729	2.775	2.886	2.900	2.970	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.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Enhancing Analysis, Modeling, and Decision Support	3.758	2.075	2.729
FY 2020 Plans: The Medical Logistics Network (MLN) 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. Assessments are currently being conducted for viable R&D projects for the budgeted amounts. MLN baseline was reduced by approximately $0.165 million resulting from overall LOG R&D $3.600 million reduction OSD Enacted FY2020 adjustments due to prior year carryover. No planned projects are impacted. The Strategic Distribution and Disposition (SDD) 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			

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** EMM / *Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
areas of research such as Blockchain, Artificial Intelligence, Machine Learning, Internet of Things (IoT), Augmented Reality, and Autonomous/Robotics systems. SDD baseline was reduced by approximately $0.907 million resulting from overall LOG R&D $3.600 million reduction OSD Enacted FY2020 adjustments due to prior year carryover. Impact of the baseline reduction will cause project delays or cancellations in support of the DLA Distribution Modernization Program initiatives, one of DLA Strategic Imperatives. ***FY 2021 Plans:*** Due to directed fiscal reductions, the Medical Logistics Network (MLN) program baseline was reduced to zero. Currently, there are no planned projects that will be impacted by the reduction. The Strategic Distribution and Disposition (SDD) program will continue to provide applied research, analytical and decision support to DLA Distribution and Disposition Services and provide support to the Distribution Modernization Program (DMP). Additionally, SDD will continue to engage with Industry, Department of Defense (DoD) sponsored Federally Funded Research and Development Centers (FFRDCs) and University-Affiliated Research Center Laboratories (UARCs) leveraging subject-matter expertise in key areas of research such as Blockchain, Artificial Intelligence, Machine Learning, Internet of Things (IoT), Augmented Reality, and Autonomous/Robotics systems. SDD will continue to incorporate Integrate Project Teams (IPT) for project collaboration and Integrated System Engineering concepts (test and evaluation) into Distribution projects. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Adjustments of $0.566 million due to DLA Fiscal Guidance reduction, civilian pay inflation, inflation for non-pay/non-fuel purchases and internal realignment. Reduction zeroed-out the Medical Logistics Network Program baseline, no projects currently planned.			
Accomplishments/Planned Programs Subtotals	3.758	2.075	2.729

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

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

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency			Date: February 2020
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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
GLTD: *Improving Logistics Processes (formerly Logistics Process)*	19.502	3.568	2.588	4.044	-	4.044	4.114	4.258	4.277	4.376	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 support DLA business functional units through applied research and development of advanced technologies to improve business processes and operational methods, leverage the application of leading edge logistics “out-of-the box” concepts using disruptive technology business tools, and support DLA’s technological transformation effort. To qualify for R&D funding, the R&D effort must develop and apply technology and processes over and above current baseline IT systems and continuous improvements efforts.

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

Innovative process changes and new technologies will be researched in these areas to drive improvements to internal costs, reduce award delays, and improve material availability, supply chain security, demand forecasting and logistical planning. This will be accomplished through the use of artificial intelligence/machine learning, blockchain technology, and research of emerging commercial best practices and technologies.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Improving Logistics Processes (ILP)	3.568	2.588	4.044
FY 2020 Plans: The Weapon Systems Sustainment (WSS) program will continue to explore new use case studies for disruptive technologies. Additional areas of interest for the five year artificial intelligence roadmap include the ability to effectively manage metadata in DLA systems to enable enterprise-wide adoption of new capabilities, development of a predictive analytics capability for backorders, and using machine learning techniques to improve operation plan logistic estimates. Projects are planned to research incorporating internet-based purchases and a contract quality control program into DLA’s acquisition processes as well as expansion of capabilities to gather and utilize market intelligence. WSS baseline was reduced by approximately $1.335 million resulting from overall LOG R&D $3.600 million reduction OSD Enacted FY2020 adjustments due to prior year carryover. Impact of the baseline reduction will cause project delays or cancellations in support of the DLA Strategic Imperatives for exploring AI/ML technologies for Predictive Analytics as well as Market Intelligence and Supply Chain security projects.			
FY 2021 Plans: The Weapon System Sustainment (WSS) program will continue research of artificial intelligence / machine learning capabilities to identify readiness drivers for retail parts support and predict vendor / distributor vulnerabilities that will impact the supply chain.			

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** GLTD / *Improving Logistics Processes (formerly Logistics Process)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Projects to leverage the Services' advances in predictive maintenance and condition based maintenance programs will continue to identify opportunities to improve DLA planning processes and retail operations. In addition, the program will collaborate with academia to research capabilities to improve the ability to acquire items with diminishing manufacturing sources or material shortages. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** No significant change.			
Accomplishments/Planned Programs Subtotals	3.568	2.588	4.044

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

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

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency			Date: February 2020
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** 04 / *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
04: *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*	17.483	10.801	11.957	3.462	-	3.462	3.466	3.535	3.743	3.825	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)	FY 2019	FY 2020	FY 2021
Title: Emergent Logistics R&D Requirements	3.801	1.957	3.462
FY 2020 Plans: The Energy Readiness Program (ERP) will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers. 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 (SCM) program will continue to address the emerging capabilities shortfalls that occur in the supply chain through major research opportunities.			
FY 2021 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** 04 / *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
The Energy Readiness Program (ERP) will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers. 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 (SCM) program will continue to address emergent and out of budget cycle requirements and opportunities within DLA's supply chains. The SCM program will expand blockchain projects across the Joint Deployment and Distribution Enterprise (JDDE). SCM baseline was reduced by approximately $0.477 million resulting from overall LOG R&D $3.600 million reduction OSD Enacted FY2020 adjustments due to prior year carryover. Impact of the baseline reduction will decrease the availability of funds for emergent technology solutions for the LOG R&D Program, to include blockchain technologies. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** No significant change.			
Accomplishments/Planned Programs Subtotals	3.801	1.957	3.462

	FY 2019	FY 2020
Congressional Add: Energy Readiness Program for Liquid Hydrocarbon Fuels	7.000	10.000
FY 2019 Accomplishments: Developed innovative technologies to produce hydrocarbon biofuels from cellulosic (plant/vegetable) matter. This effort further developed the upscaling of woody biomass-to-fuel processes. ***FY 2020 Plans:*** $5.000 million program increase for fuel conversion and $5.000 million for liquid hydro-carbon fuel.		
Congressional Adds Subtotals	7.000	10.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2021 Defense Logistics Agency		Date: February 2020
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603712S / *Logistics Research and Development Technology (Log R&D)*	**Project (Number/Name)** 04 / *Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)*

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.