Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy* / BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	54.292	3.710	3.880	0.669	-	0.669	-	-	-	-	-	-
2955: *JEDMICS*	50.667	2.771	2.837	0.000	-	0.000	-	-	-	-	-	-
3223: *Logistics R&D*	3.625	0.939	1.043	0.669	-	0.669	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

Includes development and evaluation of incentive systems for improving the productivity of civilian and military personnel. Identifies barriers to increased productivity and evaluates the effect of removing them. Develops techniques for easing the introduction of new technology to the work place. Identifies and evaluates methods for improving the quality of work-life.

Excludes civilian and military manpower and their related costs and military construction costs which are included in appropriate Management and Support elements in this program.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	3.857	3.884	4.024	-	4.024
Current President's Budget	3.710	3.880	0.669	-	0.669
Total Adjustments	-0.147	-0.004	-3.355	-	-3.355
• Congressional General Reductions	-	-0.004			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.147	0.000			
• Program Adjustments	0.000	0.000	-3.345	-	-3.345
• Rate/Misc Adjustments	0.000	0.000	-0.010	-	-0.010

Change Summary Explanation

The FY2022 funding request was reduced by $0.364 million to account for the availability of prior year execution balances.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603739N *I Navy Logistic Productivity*

The decrease to project 2955 in FY 2022 is due to the migration of capability to Aviation Logistics Environment (ALE). This will enable JEDMICS to be incorporated into the ALE Aviation Product Lifecycle Management tool.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*				Project (Number/Name) 2955 / *JEDMICS*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
2955: *JEDMICS*	50.667	2.771	2.837	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In FY85 Congress directed the Services and Defense Logistics Agency to permanently capture, manage and control engineering data in digital format so it would be available to support competitive spares re-procurement. The Joint Engineering Data Management Information & Control System (JEDMICS) program manages and controls 100,000,000 engineering images and has 13,000 authorized users responsible for over 77,000 user sessions per month. Over 1.2 million digital images are retrieved each month. New data and new users are added each month as DoD re-engineers its business processes to take advantage of digital data that is managed and controlled for corporate reuse. The JEDMICS system is deployed at 5 interoperable sites that service user locations worldwide. Data stored in JEDMICS is used for Logistics Support, Spares re-procurement, Weapons Systems procurement, Engineering, Maintenance, Distribution, Manufacturing, Air National Guard and Deployed Engineering Technical Services organizations. JEDMICS facilitates work process re-design since it brings the electronic drawings to the desktop, shop floor or flight line in real time eliminating walk, wait and slack time to retrieve drawings. Additionally, Administrative Lead Time, Repair Turn Around Time, Engineering Change Proposal processing time, demilitarization time, and all cycle times dependent on engineering data have decreased with the real time availability of digital engineering data. JEDMICS also facilitates Electronic Commerce since it produces digital technical data packages that can be forwarded along with an electronic order. Funds are for Commercial Off The Shelf (COTS) test, evaluation and integration. JEDMICS development efforts are required to integrate and test COTS upgrades.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: JEDMICS Development	2.745	2.811	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Conduct development efforts associated with JEDMICS software releases. Conduct COTS requirements definition, evaluation, integration and testing of annual baseline releases. Conduct technology insertion of the JEDMICS system that is required to protect the $21B digital data asset managed in JEDMICS. These annual releases are necessary to incorporate changes that are essential to keeping the system running within the Navy's Enterprise. They include Service mandated Information Technology changes, storage capability increases for emerging engineering data formats, changes to accommodate commercial hardware and software end-of-life product obsolescence, and defenses for newly recognized Information Assurance vulnerabilities affecting the systems various software applications.					
FY 2021 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 2955 / *JEDMICS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Develop and integrate JEDMICS Software Release 3.0.22 ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY 2022 due to the migration of capability to Aviation Logistics Environment (ALE). This will enable JEDMICS to be incorporated into the ALE Aviation Product Lifecycle Management tool.					
Title: JEDMICS Test	0.026	0.026	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Conduct test and readiness reviews and functional performance tests on JEDMICS system. ***FY 2021 Plans:*** Complete DT of JEDMICS Software Release 3.0.21 and 3.0.22. ***FY 2022 Base Plans:*** N/A ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Decrease in FY 2022 due to the migration of capability to Aviation Logistics Environment (ALE). This will enable JEDMICS to be incorporated into the ALE Aviation Product Lifecycle Management tool.					
Accomplishments/Planned Programs Subtotals	2.771	2.837	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Competitively awarded requirements type contract for engineering, design, development and test efforts. Performance-based reviews conducted quarterly by the Project Management Office.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*	Project (Number/Name) 2955 / *JEDMICS*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	TBD	TBD : TBD	0.000	0.000		0.160	Oct 2020	0.000		-		0.000	-	-	-
Software Development	Various	Northrop Grumman Information : McLean, VA	44.453	2.351	Nov 2019	2.625	Nov 2020	0.000		-		0.000	-	-	-
Prior Year Support no Longer Funded in Budget Year or Out years	Various	Various : Various	1.862	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	46.315	2.351		2.785		0.000		-		0.000	-	-	N/A

Remarks

Funds are for development efforts associated with Commercial Off The Shelf (COTS) obsolescence on the fully deployed COTS Intensive Joint Engineering Data Management Infomation & Control System. Funds are for COTS evaulation, integration, and test and evaluation. The common baseline will be maintained and obsolete COTS software and hardware will be replaced. Baseline releases will protect joint interoperability, upgrade operating systems for security patches and supportable versions, support integration to replace obsolete COTS, and upgrade the Oracle database to supportable versions.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	MIPR	WR-ALC/TILAB : Robins AFB, GA	2.624	0.015	Oct 2019	0.026	Oct 2020	0.000		-		0.000	-	-	-
		Subtotal	2.624	0.015		0.026		0.000		-		0.000	-	-	N/A

Remarks

Supports testing and evaluation of baseline releases in a user environment.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	Naval Air Warfare Center : NAS Patuxent River, MD	0.335	0.008	Oct 2020	0.015	Oct 2020	0.000		-		0.000	-	-	-
Travel	Various	Various : Various	0.310	0.000		0.011	Jul 2021	0.000		-		0.000	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*	Project (Number/Name) 2955 / *JEDMICS*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Mgmt no Longer Funded in Budget Year or Out years	Various	Various : Various	1.083	0.000		0.000		0.000		-		0.000	-	-	-
Program Management Support	WR	Fleet Readiness Center Mid Atlantic : NAS Patuxent River, MD	0.000	0.397	Apr 2020	0.000		0.000		-		0.000	-	-	-
		Subtotal	1.728	0.405		0.026		0.000		-		0.000	-	-	N/A

Remarks

Supports program compliance reviews and program related travel by government employees.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	50.667	2.771		2.837		0.000		-		0.000	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 2955 / *JEDMICS*

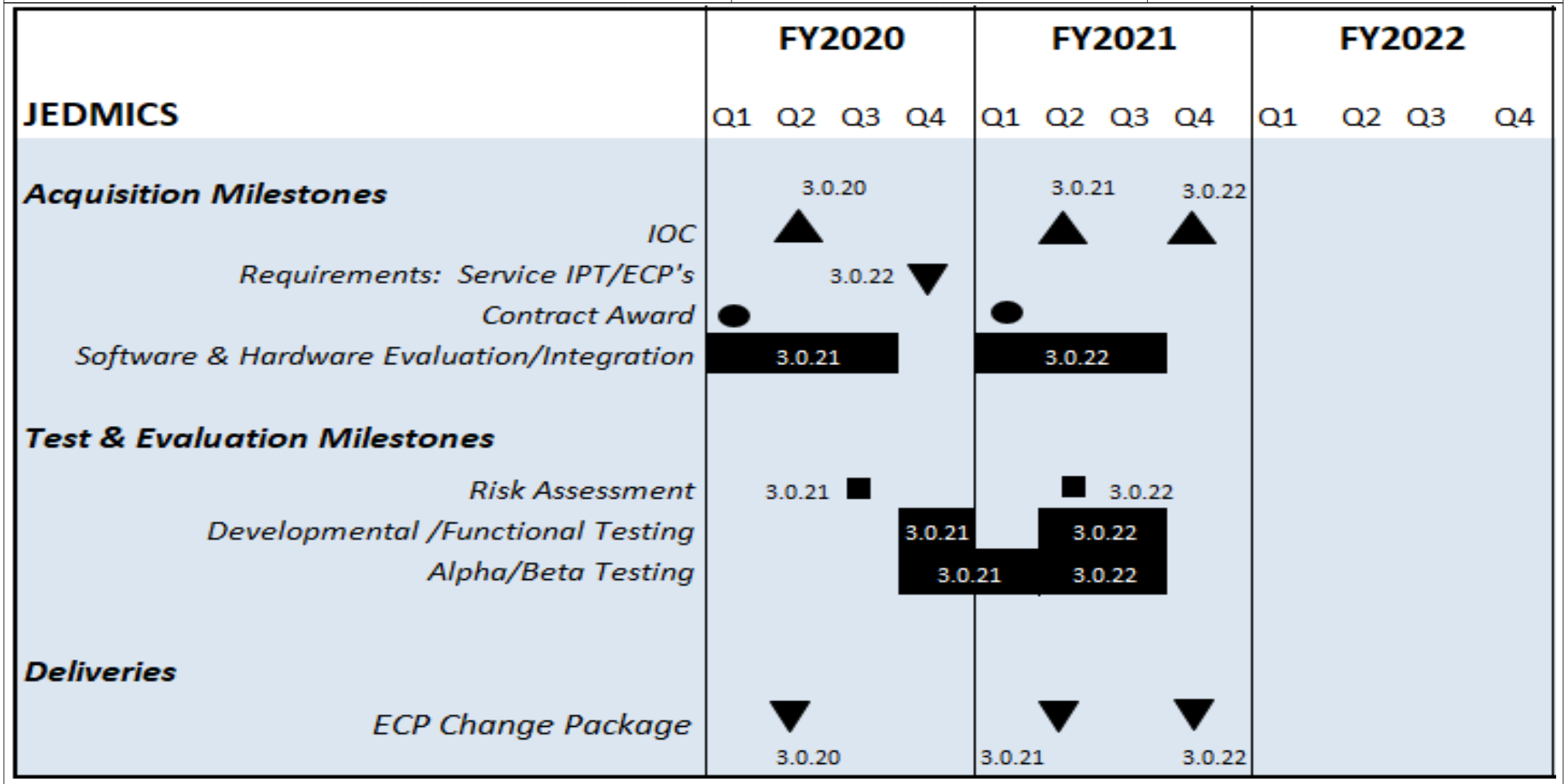


Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 2955 / *JEDMICS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JEDMICS				
Aquisition Milestones: IOC: IOC Release 3.0.20	2	2020	2	2020
Aquisition Milestones: IOC: IOC Release 3.0.21	2	2021	2	2021
Aquisition Milestones: IOC: IOC Release 3.0.22	4	2021	4	2021
Aquisition Milestones: Requirements: Service IPT/ECPs: Service IPT/ECPs Release 3.0.22	4	2020	4	2020
Aquisition Milestones: Contract Award: 2020 Contract Award	1	2020	1	2020
Aquisition Milestones: Contract Award: 2021 Contract Award	1	2021	1	2021
Aquisition Milestones: Software & Hardware Evaluation/Integration: Software Hardware Evaluation/Integration Release 3.0.21	1	2020	3	2020
Aquisition Milestones: Software & Hardware Evaluation/Integration: Software Hardware Evaluation/Integration Release 3.0.22	1	2021	3	2021
Test & Evaluation Milestones: Risk Assesment: Risk Assessment Release 3.0.21	3	2020	3	2020
Test & Evaluation Milestones: Risk Assesment: Risk Assessment Release 3.0.22	2	2021	2	2021
Test & Evaluation Milestones: Developmental/Functional Testing: Developmental/ Functional Testing Release 3.0.21	4	2020	4	2020
Test & Evaluation Milestones: Developmental/Functional Testing: Developmental/ Functional Testing Release 3.0.22	2	2021	3	2021
Test & Evaluation Milestones: Alpha/Beta Testing: Alpha/Beta Testing Release 3.0.21	4	2020	1	2021
Test & Evaluation Milestones: Alpha/Beta Testing: Alpha/Beta Testing Release 3.0.22	2	2021	3	2021
Deliveries: Engineering Change Package: Engineering Change Package Release 3.0.20	2	2020	2	2020
Deliveries: Engineering Change Package: Engineering Change Package Release 3.0.21	2	2021	2	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 2955 / *JEDMICS*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Engineering Change Package: Engineering Change Package Release 3.0.22	4	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*				Project (Number/Name) 3223 / *Logistics R&D*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
3223: *Logistics R&D*	3.625	0.939	1.043	0.669	-	0.669	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Stable annual funding is required to facilitate implementation and execution of a robust, flexible Logistics R&D program that will provide the means for Naval Supply Systems Command (NAVSUP) to effectively pursue solutions to mission-related capability and technology gaps. The NAVSUP Logistics R&D program has an established infrastructure and business process for ensuring that R&D funds are applied to projects that address high priority enterprise needs established in accordance with OPNAV goals and the NAVSUP Commander's Guidance.

From a process perspective, Logistics R&D investments are governed by a NAVSUP enterprise-wide Executive Steering Group (ESG) chaired by the NAVSUP Vice Commander, and comprised of SES and Command leadership representatives. The ESG ratifies capability and technology gaps identified by all activities within the enterprise, and then assesses and prioritizes all proposed Logistics R&D initiatives in accordance with their potential for filling the established gap and generating return on investment.

The established Logistics R&D business management process has currently identified capability/technology gaps in the following general areas: 1) the need to develop formalized food service management techniques that focus on increased efficiency of new and existing systems and facilities. 2) the need to modernize quality of life (QOL) services to improve overall services, offer additional desired features and reduce total ownership costs, 3) the need to assess clothing protection for the warfighter in areas of thermal/flame threats, protective footwear, and physical (hearing, vibration, etc.) clothing/accessories, 4) the need to develop logistics data access and information sharing through enhanced Graphical User Interfaces (GUI) and web-based data services, 5) the need to develop a capability that allows Integrated Logistics Support (ILS) repair and modernization tools, 6) the need to leverage breakthrough technologies to improve supply chain processing. This modest R&D investment will establish a NAVSUP Logistics R&D Program to explore additional technologies and significantly increase potential cost savings.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**
Title: Supply Chain Optimization	0.341	0.125	0.136	0.000	0.136
Articles:	-	-	-	-	-
Description: Enable innovation in our supply chain processes in the areas of data sciences, logistics IT application development, and quality engineering through incorporation of Science, Technology, Engineering, and Math (STEM) projects performed by interns and academia. Peform market research on emerging supply chain technologies and methods that could be adopted to support the DoN/DoD material supply chain.					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Developed a new functionality (software supporting data structure and migration of current data) within Ordinance Information System (OIS) that provides visibility of serialized assets use and requirements. ***FY 2021 Plans:*** Supply Capabilities Repository to Lower Costs of Contracts, Reduce Lead-Time of Spare Parts Procurements, and Lower Risk of Supply Chain Availability: The current method for finding sources for Critical Application Items (CAI) and Non-Critical Items (NC) are based on employee corporate knowledge of different vendor capabilities and calling a company to see if they have capacity and interest. Newer employees generally know few sources and may not know all the capabilities associated with each vendor. NAVSUP needs to create a Sourcing Portal with a repository listing of companies and capabilities. As requirements are submitted by NAVSUP without any or enough sources, an employee should review the drawing to find requirements, enter the requirements into the repository, and receive a list of compatible companies' contact information. This repository and workflow will increase the pool of known companies and their capabilities for any part thereby increasing competition and lowering lead-time and the costs to the Navy. Development of this Sourcing Portal will mitigate risk to the supply chain by providing a broad and complete visibility of vendor's capacity and capability. ($125K) ***FY 2022 Base Plans:*** Supply Capabilities Repository to Lower Costs of Contracts, Reduce Lead-Time of Spare Parts Procurements, and Lower Risk of Supply Chain Availability: The current method for finding sources for Critical Application Items (CAI) and Non-Critical Items (NC) are based on employee corporate knowledge of different vendor capabilities and calling a company to see if they have capacity and interest. Newer employees generally know few sources and may not know all the capabilities associated with each vendor. NAVSUP needs to create a Sourcing Portal with a repository listing of companies and capabilities. As requirements are submitted by NAVSUP without any or enough sources, an employee should review the drawing to find requirements, enter the requirements into the repository, and receive a list of compatible companies' contact information. This repository and workflow will increase the pool of known companies and their capabilities for any part thereby increasing competition and lowering lead-time and the costs to the Navy. Development of this Sourcing Portal will mitigate risk to the supply chain by providing a broad and complete visibility of vendor's capacity and capability. ($209K) ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
No significant change from FY2021 to FY2022					
Title: Readiness through Logistics Solutions	0.347	0.150	0.136	0.000	0.136
Articles:	-	-	-	-	-
Description: Supply chain improvements are required to support logistics efficiency and Fleet readiness through logistics solutions technological improvements. Develop technological capabilities that improve Naval Logistics in part or in its record (from manufacture, storage, delivery, use, maintenance, and disposal). ***FY 2021 Plans:*** NAVSUP Augmented Reality (AR) Initiative: NAVSUP Business Systems Center (BSC) is an epicenter for technology Insertion for Navy. In addition, BSC provides end-to-end program management and lifecycle management for Business Systems and a variety of DoD Information Systems. An emerging technology at the forefront of the commercial sector is Virtual/Mixed Reality (VR). VR has vast proven industrial applications for supporting training, warfighting simulations, system maintenance, collaboration and logistics. Augmented Reality harnesses the power of virtual reality while creating an enhanced version of reality created by the use of technology to add digital information to any space. NAVSUP has a requirement to assess emerging VR/MR technologies to fully understand and evaluate the following: a) The technological maturity of the hardware and software, b) The full costs of VR/MR systems and implementation parameters, c) The capabilities and "ready now" use cases involving supply and maintenance applications, and d) the system architectures required to support VR/MR systems, to include security postures. NAVSUP will perform a series of technical demonstrations and hands on workshops for the technical teams. The purpose of the engagements will be to use several VR/MR systems and study the applications including the Microsoft HoloLense 2 Platform, Blippar, Meta 2, MagicLeap One, Smart Reality, AccuVein, Bosh augmented understanding of the technology, the supporting architecture and the strengths/limitations of the VR capability. Specific use cases will involve maintainers and warehouse operations. ($150K) ***FY 2022 Base Plans:*** NAVSUP Augmented Reality (AR) Initiative: NAVSUP Business Systems Center (BSC) is an epicenter for technology Insertion for Navy. In addition, BSC provides end-to-end program management and lifecycle management for Business Systems and a variety of DoD Information Systems. An emerging technology at the forefront of the commercial sector is Virtual/Mixed Reality (VR). VR has vast proven industrial applications for supporting training, warfighting simulations, system maintenance, collaboration and logistics. Augmented Reality harnesses the power of virtual reality while creating an enhanced version of reality created by the use of technology to add digital information to any space. NAVSUP has a requirement to assess emerging VR/MR					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
technologies to fully understand and evaluate the following: a) The technological maturity of the hardware and software, b) The full costs of VR/MR systems and implementation parameters, c) The capabilities and "ready now" use cases involving supply and maintenance applications, and d) the system architectures required to support VR/MR systems, to include security postures. NAVSUP will perform a series of technical demonstrations and hands on workshops for the technical teams. The purpose of the engagements will be to use several VR/MR systems and study the applications including the Microsoft HoloLense 2 Platform, Blippar, Meta 2, MagicLeap One, Smart Reality, AccuVein, Bosh augmented understanding of the technology, the supporting architecture and the strengths/limitations of the VR capability. Specific use cases will involve maintainers and warehouse operations. ($209K) ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** No significant change from FY2021 to FY2022					
Title: Clothing Protection for the Warfighter ***Articles:*** ***Description:*** Identify challenges to effectively manage durability and safety aspects of common work/combat uniforms for the warfighter. Eliminate risk of hazardous factors such as fire, weather, and general wear/tear to maximize readiness and strength in Fleet uniforms. Assist with specifications associated with permanent press finish related to the rollout of the Navy's Type III uniform. ***FY 2021 Plans:*** 3D Virtual Design Software for Improving Uniform Fit and Providing Virtual Prototypes: This new capability will address a need for quick, affordable, and accurate prototyping. The system will provide a capability to bypass the time consuming process of multiple physical prototypes for any type of item whether it be dress, utility, or chemical-biological, resulting in a better fitting garment in a shorter amount of time. ($100K) Sensor Data Validation and System Verification of Articulating Thermal Sensing Manikin for use in a Flame Filled Environment: Develop a methodology of characterizing each sensor response in place and evaluate the capabilities and performance of the Articulating Thermal Sensing Manikin (ARTHESMA) system and integration with the systems at the Ouelette Thermal Test Facility in Natick, MA. ($75K)	0.251 -	0.768 -	0.397 -	0.000 -	0.397 -

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Analysis of Impact on Navy Uniforms by Proposed Change of Navy Shipboard Wash Chemicals: Investigate the acceptability of the product system change from Ecolab Solid Surge Navigator Systems to Ecolab Aquanomic Biocare System for shipboard laundry and is there is any effect/change on uniform care labels. This new greener approach in shipboard laundry systems has the potential to reduce energy costs, lower water consumption and through this evaluation determine if there are reduced negative effects that current washing has on material. ($90K) Improved Flame Resistance Variant Coverall (I2FRV): Management of organizational clothing will be streamlined by eliminating three (3) coveralls/70 NSNs from the system. Sailors will benefit by receiving a more functional coverall which can work in multiple shipboard environments, eliminating the need for storage and management of multiple coverall types. ($75K) Improved Shipboard Flame Resistance (FR) Jacket: The goal of this effort is to develop an improved cold weather shipboard FR jacket with a modernized design which meets or exceeds current requirements, while being cheaper, lighter weight, and space-saving. Current jacket design and materials in the system have not been evaluated in over 20 years. ($100K) Standardization of Identification Markings and Technology for Organizational Clothing Worn by Navy Sailors in Surface Warfare Operations: This will establish a standard identification requirement for U.S. Navy organizational clothing and provide a recommendation for integrating the most effective technology solutions into both Sailor's work environment and uniform/personal equipment without adverse impact to the mission. ($90K) Identification of Sustainability Implementation Opportunities to Navy Clothing and Equipment throughout the Acquisition Life Cycle: Innovate the uniform supply chain by exploring sustainability in areas such as manufacturing process, use of recycled materials, repurposing surplus material, and recycling and reclaiming end items while implementing more closed loop systems and creation of circular product lifecycles. ($75K) Standard Sizing to Incorporate into Body Scanners: The objective is to establish standardized sizes for uniforms and input the data into current developmental Body Scanner Technology. This project will validate the necessity of standardized sizes in order for the Body Scanner technology to accurately predict a Sailor's uniform size. ($77K) Validation of Wissler Apparel Requirement Model (WARM) and expansion of protective clothing database for the model to predict thermal status in Extreme Environments: The project objective is to select a stable FORTRAN code for Wissler's model to run WARM (graphical user interface based). Using the Navy Clothing and Textile					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Research Facility's (NCTRF) submersible thermal manikin (NEMO) expand the database of localized thermal properties of current and new anti-exposure suits as well as protective garments used to support extreme climate operations. Predict safe exposure limits, and provide garment design guidelines to achieve required mission requirements. ($90K)					
FY 2022 Base Plans: 3D Virtual Design Software for Improving Uniform Fit and Providing Virtual Prototypes: This new capability will address a need for quick, affordable, and accurate prototyping. The system will provide a capability to bypass the time consuming process of multiple physical prototypes for any type of item whether it be dress, utility, or chemical-biological, resulting in a better fitting garment in a shorter amount of time. ($80K) Sensor Data Validation and System Verification of Articulating Thermal Sensing Manikin for use in a Flame Filled Environment: Develop a methodology of characterizing each sensor response in place and evaluate the capabilities and performance of the Articulating Thermal Sensing Manikin (ARTHESMA) system and integration with the systems at the Ouelette Thermal Test Facility in Natick, MA. ($60K) Analysis of Impact on Navy Uniforms by Proposed Change of Navy Shipboard Wash Chemicals: Investigate the acceptability of the product system change from Ecolab Solid Surge Navigator Systems to Ecolab Aquanomic Biocare System for shipboard laundry and is there is any effect/change on uniform care labels. This new greener approach in shipboard laundry systems has the potential to reduce energy costs, lower water consumption and through this evaluation determine if there are reduced negative effects that current washing has on material. ($75K) Improved Flame Resistance Variant Coverall (I2FRV): Management of organizational clothing will be streamlined by eliminating three (3) coveralls/70 NSNs from the system. Sailors will benefit by receiving a more functional coverall which can work in multiple shipboard environments, eliminating the need for storage and management of multiple coverall types. ($60K) Improved Shipboard Flame Resistance (FR) Jacket: The goal of this effort is to develop an improved cold weather shipboard FR jacket with a modernized design which meets or exceeds current requirements, while being cheaper, lighter weight, and space-saving. Current jacket design and materials in the system have not been evaluated in over 20 years. ($80K)					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Standardization of Identification Markings and Technology for Organizational Clothing Worn by Navy Sailors in Surface Warfare Operations: This will establish a standard identification requirement for U.S. Navy organizational clothing and provide a recommendation for integrating the most effective technology solutions into both Sailor's work environment and uniform/personal equipment without adverse impact to the mission. ($75K) Identification of Sustainability Implementation Opportunities to Navy Clothing and Equipment throughout the Acquisition Life Cycle: Innovate the uniform supply chain by exploring sustainability in areas such as manufacturing process, use of recycled materials, repurposing surplus material, and recycling and reclaiming end items while implementing more closed loop systems and creation of circular product lifecycles. ($60K) Standard Sizing to Incorporate into Body Scanners: The objective is to establish standardized sizes for uniforms and input the data into current developmental Body Scanner Technology. This project will validate the necessity of standardized sizes in order for the Body Scanner technology to accurately predict a Sailor's uniform size. ($65K) Validation of Wissler Apparel Requirement Model (WARM) and expansion of protective clothing database for the model to predict thermal status in Extreme Environments: The project objective is to select a stable FORTRAN code for Wissler's model to run WARM (graphical user interface based). Using the Navy Clothing and Textile Research Facility's (NCTRF) submersible thermal manikin (NEMO) expand the database of localized thermal properties of current and new anti-exposure suits as well as protective garments used to support extreme climate operations. Predict safe exposure limits, and provide garment design guidelines to achieve required mission requirements. ($70K) ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Due to availability of prior year funding Virtual design software, impact of shipboard wash chemicals, standardization of ID markings, identification of sustainability implementation opportunities, and standard sizing projects will be rephased into FY2023 and FY2024.					
Accomplishments/Planned Programs Subtotals	0.939	1.043	0.669	0.000	0.669

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

NAVSUP R&D executed through firm fixed price negotiated contracts and NAVSUP support. Performance-based reviews conducted quarterly by the Project Management Office.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603739N / *Navy Logistic Productivity*	Project (Number/Name) 3223 / *Logistics R&D*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Effective Food Service Management	C/FFP	Various : Various	0.000	0.000		0.000		0.000		-		0.000	-	-	-
Quality of Life Services Modernization & Cost Reduction (Initiative 1)	C/FFP	BSC : Mechanicsburg, PA	0.259	0.000		0.000		0.000		-		0.000	-	-	-
Quality of Life Services Modernization & Cost Reduction (Initiative 2)	C/FFP	Various : Various	1.037	0.000		0.000		0.000		-		0.000	-	-	-
Readiness through Logistics Solutions	C/FFP	Various : Various	1.203	0.347	Dec 2019	0.150	Dec 2020	0.136	Dec 2021	-		0.136	-	-	-
Clothing Protection for the Warfighter	C/FFP	NCTRF : Natick,MA	1.126	0.251	Oct 2019	0.768	Oct 2020	0.397	Oct 2021	-		0.397	-	-	-
Supply Chain Optimization	C/FFP	Various : Various	0.000	0.341	Dec 2019	0.125	Dec 2020	0.136	Dec 2021	-		0.136	-	-	-
		Subtotal	3.625	0.939		1.043		0.669		-		0.669	-	-	N/A

Remarks

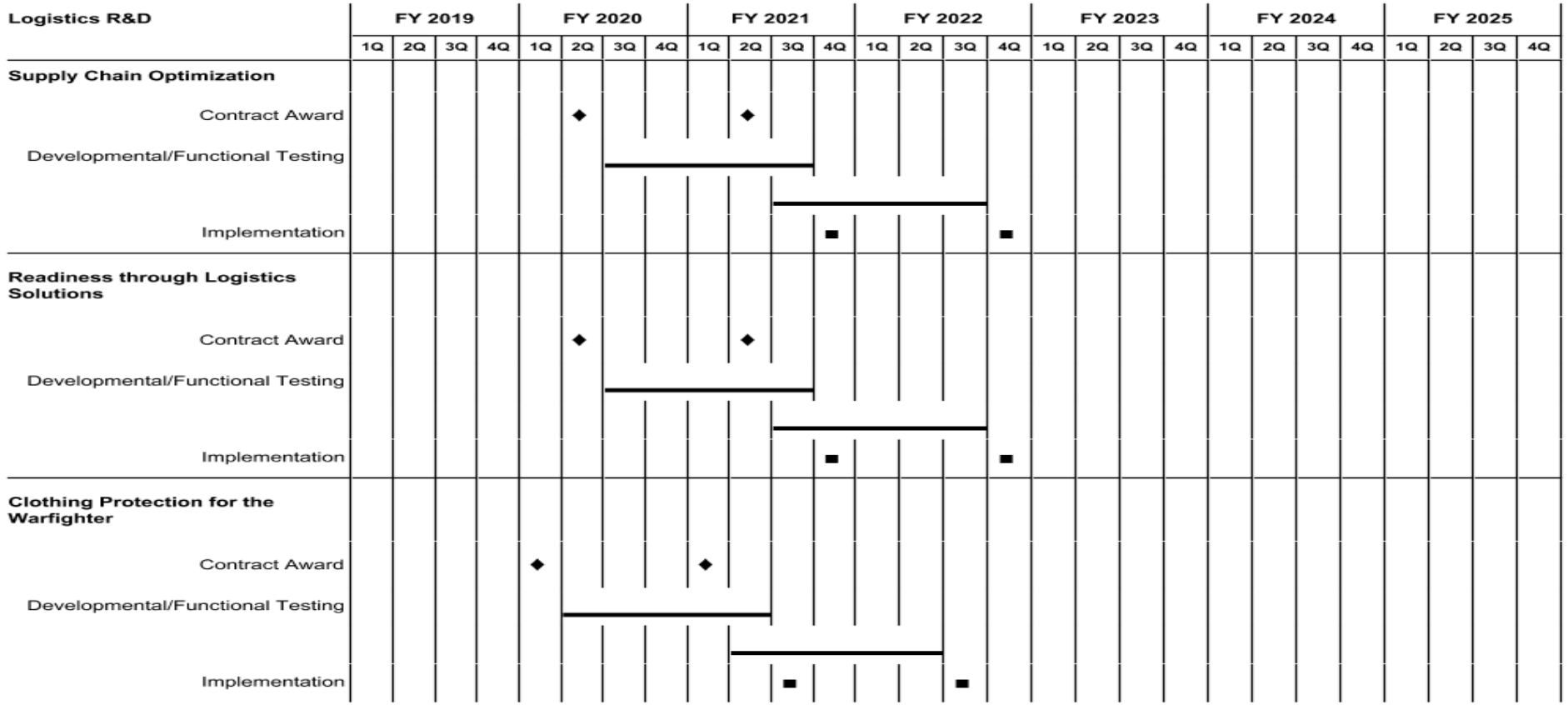
There were no FY19 projects.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.625	0.939		1.043		0.669		-		0.669	-	-	N/A

Remarks

In previous plans, NAVSUP forecast budget requirements based on projections rooted in the current year's capability gaps. As our priorities and Strategic Guidance evolves so does our budget requirements. Through leveraging new technologies, NAVSUP will enhance efforts for supply ashore and distant support. We will strengthen our supply chain information technology and management solutions for supply and financial requirements. We will collaborate with partners to improve the quality-of-life experiences and expand services to deployed forces. NAVSUP will continue to build an ethical and effective workforce dedicated to the mission by developing new technological programs that are advantageous to the warfighter. We will reduce risk and minimize vulnerabilities to protect against disruptions to supply chain and business systems. All of our actions will follow a culture of moral excellence to successfully execute the current and future missions of NAVSUP.

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*



2021DON - 0603739N - 3223

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Logistics R&D				
Supply Chain Optimization: Contract Award: FY 2020 Contract Award	2	2020	2	2020
Supply Chain Optimization: Contract Award: FY 2021 Contract Award	2	2021	2	2021
Supply Chain Optimization: Developmental/Functional Testing: FY 2020 Developmental/Functional Testing	3	2020	3	2021
Supply Chain Optimization: Developmental/Functional Testing: FY 2021 Developmental/Functional Testing	3	2021	3	2022
Supply Chain Optimization: Implementation: FY 2020 Implementation	4	2021	4	2021
Supply Chain Optimization: Implementation: FY 2021 Implementation	4	2022	4	2022
Readiness through Logistics Solutions: Contract Award: FY 2020 Contract Award	2	2020	2	2020
Readiness through Logistics Solutions: Contract Award: FY 2021 Contract Award	2	2021	2	2021
Readiness through Logistics Solutions: Developmental/Functional Testing: FY 2020 Developmental/Functional Testing	3	2020	3	2021
Readiness through Logistics Solutions: Developmental/Functional Testing: FY 2021 Developmental/Functional Testing	3	2021	3	2022
Readiness through Logistics Solutions: Implementation: FY 2020 Implementation	4	2021	4	2021
Readiness through Logistics Solutions: Implementation: FY 2021 Implementation	4	2022	4	2022
Clothing Protection for the Warfighter: Contract Award: FY 2020 Contract Award	1	2020	1	2020
Clothing Protection for the Warfighter: Contract Award: FY 2021 Contract Award	1	2021	1	2021
Clothing Protection for the Warfighter: Developmental/Functional Testing: FY 2020 Developmental/Functional Testing	2	2020	2	2021
Clothing Protection for the Warfighter: Developmental/Functional Testing: FY 2021 Developmental/Functional Testing	2	2021	2	2022
Clothing Protection for the Warfighter: Implementation: FY 2020 Implementation	3	2021	3	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603739N / *Navy Logistic Productivity*	**Project (Number/Name)** 3223 / *Logistics R&D*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Clothing Protection for the Warfighter: Implementation: FY 2021 Implementation	3	2022	3	2022