Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Information Systems Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	207.059	17.675	19.145	19.299	-	19.299	19.535	23.146	20.090	20.492	Continuing	Continuing
E65: *Modeling and Simulation*	119.793	4.101	4.085	4.190	-	4.190	4.286	4.389	4.484	4.574	Continuing	Continuing
T62: *DoD Information Network (DODIN) Systems Engineering and Support*	87.266	11.439	15.060	15.109	-	15.109	15.249	18.757	15.606	15.918	Continuing	Continuing
T-0010: *Enterprise Messaging*	0.000	2.135	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Infrastructure Engineering and Integration effort encompasses two projects, the DoD Information Network (DoDIN) Systems Engineering Support and Modeling and Simulation End-to-End (E2E) Architecture.

DoD Information Network Systems Engineering Support:
The DoDIN Systems Engineering and Support project performs research, development, and experimentation of emerging technologies to fill capability shortfalls and technology gaps. Through conducting Technical Exchange Meetings (TEM) with other DoD components, Program Management Offices, and Technical Directors, DISA identifies gaps and shortfalls, pursues innovative solutions, and engages industry for commercial best practices. The DoDIN Systems Engineering and Support project supports technical system engineering reviews for enterprise products and services and resolves gaps related to Machine Learning/Artificial Intelligence (AI), Classified and Unclassified mobile access, Quantum Resistant Cryptography (the cryptography used to authenticate and secure data-in-transit that is susceptible to attacks), Enterprise Architecture development, Cyber Defense, and other technologies.

Modeling and Simulation End-to-End (E2E) Architecture:
Within the Modeling and Simulation End-to-End Architected project, there are two major activities: Modeling and Simulation and DoDIN Enterprise Wide Systems Engineering (EWSE).

The Modeling and Simulation activity provides architecture, systems engineering, and E2E analytical functions for DISA and its customers, ensuring integrated capabilities fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include:
• DoD Chief Information Officer (DoD CIO) - Receives modeling analysis to determine the network and user latency impact of adding Outside Contiguous United States (OCONUS) cloud services.
• Services and Regional COCOMs - Receives modeling analyses and recommendations for architecture changes such as additional sites and the increased capacity for the Pacific theater.
• DoD CIO and Services -Receives modeling projections for the utilization of new classified desktop and mobility services to be migrated to cloud environments.
• DoD agencies - Receive training and support on the Joint Communications Simulation System, which is the system used to model network and applications.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Information Systems Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0302019K *I Defense Info. Infrastructure Engineering and Integration*

The DoDIN EWSE activity resolves near term (one to three years) high-priority technical issues, as defined by DoD CIO and DISA, that impact operational capabilities affecting DoDIN E2E interoperability and performance. For example, the DoDIN EWSE resolved poor M365 Teams performance. They fixed Quality of Service (QoS) configuration issues that were mismarking traffic, which resulted in poor MS365 Teams calls performance. Additional activities include development and testing of models to simulate planned changes to enterprise services, to include migrating DISA enterprise services to cloud architectures, adding capacity to support new customers, and completing network changes to support enhanced security.

The Architecture effort provides interoperability, performance analysis, and systems engineering support for architecture evolution across DISA. DISA works with its customers to ensure integrated capabilities can fulfill warfighter mission requirements and continuously revise these Enterprise Architectures to meets the needs of the department.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	17.675	19.145	19.551	-	19.551
Current President's Budget	17.675	19.145	19.299	-	19.299
Total Adjustments	0.000	0.000	-0.252	-	-0.252
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustment	-	0.000	-0.252	-	-0.252

Change Summary Explanation

The decrease of -$0.252 is due to a reduction in the number of assessments required through refinement of technology discovery and evaluation methods, such as improving ability to eliminate technology candidates through "quick look" evaluations. In FY 2024, twenty-five studies of commercial technology products will be conducted, as opposed to the twenty-seven completed in FY 2023.

Note: FY 2022 amount includes -$0.402M that was transferred for the SBIR/STTR program.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	Project (Number/Name) E65 / *Modeling and Simulation*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
E65: *Modeling and Simulation*	119.793	4.101	4.085	4.190	-	4.190	4.286	4.389	4.484	4.574	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Modeling and Simulation activity provides architecture, systems engineering, and E2E analytical functions for DISA and its customers, ensuring integrated capabilities fulfill warfighter mission requirements. Modeling and Simulation activities support the DoD communications planning and investment strategy, to include application performance assessments, contingency planning, network capacity planning and diagnostics, and systems-level modeling and simulation.

Efforts provide information awareness for Combatant Commands through application solutions for integrated networks, including DoD's missions and the Defense Information Systems Network (DISN), by:
1. Supporting the development and implementation of DoDIN EWSE processes essential to evolving the DoDIN, enabling interoperability, and improving E2E performance for critical DoDIN programs.
2. Developing standardized systems analyses and integration processes to improve integration across DISA for all DISA-developed communication systems and services to avoid interoperability issues.
3. Providing underlying modeling, simulation, and analytical support for E2E systems engineering and assessment.

Additional project efforts provide DoD decision makers with services and a suite of tools to identify key points of impact on DoD command and control information systems. These tools and services can recommend trade-offs within the DoDIN configuration with respect to prioritized performance, availability, and security. This effort will reduce risk in products deployed to the warfighter through improved network performance and traffic analysis and will provide efficient means of troubleshooting and subsequent redesign.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Modeling and Simulation - Capability Development, Test, and Evaluation	2.908	1.685	1.785
Description: This effort is to update modeling and simulation tools to support evaluation of combined Internet Protocol (IP) and optical infrastructure, multiple software defined wide area network interconnectivity, and Next Generation Networking. The Next Generation Networking includes zero-trust architectures and encrypted Gray networks, which provide users access to the classified networks without having the full classified kit based on National Security Agency (NSA) capabilities.			
FY 2023 Plans: Perform research, development, test, and evaluation of systems to replace existing siloed IP, optical, and application modeling tools and begin implementation of replacements.			
FY 2024 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Continue development and implementation of modeling and simulation suites and optimize for supporting Next Generation architectures and applications. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase of $0.100 from FY 2023 to FY 2024 is to support analysis for highspeed wide area network encryption using Media Access Control Security (MACsec), which is a secure communication method, and other technologies.			
Title: End-to-End (E2E) Architecture ***Description:*** This project provides E2E architecture, interoperability analysis, performance analysis, and systems engineering support for architecture evolution across DISA. DISA works with its customers to ensure integrated capabilities can fulfill warfighter mission requirements by continuously revising these Enterprise Architectures to meet the needs of the department. ***FY 2023 Plans:*** Key activities in FY2023 include: • Supporting architecture development for DISA innovation and digital transformation projects such as Zero-Trust Architecture (ZTA). The ZTA provides improved accuracy in the inventory of infrastructure and network monitoring and alerts. Additionally, it helps to improve end-user experience and security policies. • Developing and maintaining DoD Architecture Framework (DODAF) based end-to-end IT engineering architectures and artifacts across the DISA enterprise. • Continuing development of Tactical Data Link Configuration Management Tool (TCMT) application. TCMT is a standards production tool to improve configuration management of eighteen command and control U.S. Military Standards and NATO Standardization Agreements (STANAGs). ***FY 2024 Plans:*** Key activities in FY2024 include: • Continuing architecture development for DISA innovation and digital transformation projects such as Zero-Trust Architecture. In FY2024 a detailed design of the ZTA will be developed, building on the initial design completed in FY2023. • Continuing development and maintenance of DODAF-based E2E IT engineering architectures and artifacts for emerging DISA enterprise solution architectures. Specific solution architectures targeted for FY2024 are the DISA Management Network (DMN) architecture and the DISA Privileged Access (PAM) architecture. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The decrease of -$0.006 from FY 2023 to FY 2024 is due to contract administration efficiencies	1.193	1.687	1.681
Title: Modeling and Simulation - Model Development for Entire Network Path ***Description:*** Develop scenario-based models to support new systems and applications.	0.000	0.713	0.724

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
FY 2023 Plans: Key activities in FY2023 include: • Developing scenario-based models for automated DISN views and troubleshooting tools. • Continuing migration to unclassified Impact Level 5 (IL5) and Secret Level 6 (IL6) cloud-based development and monitoring tools. • Developing modeling and simulation scenarios to analyze planned changes to the DISN optical and IP core network. This will include a ten-fold bandwidth increase across OCONUS and other architectures. • Developing application performance monitoring to support reliable operation of enterprise services and applications. This will include expanding monitoring of enterprise applications to improve modeling results and end user performance. ***FY 2024 Plans:*** Key activities in FY2024 include: • Developing capabilities for analysis of software defined networking (SDN), which is an approach to networking that uses software-based controllers to communicate with underlying hardware infrastructure to direct network traffic. • Performing test and evaluation of DISN Internet Access Point security solutions, which provide wireless area networks to extend coverage and increase the number of users that can connect. • Researching technologies and solutions that can be transitioned to operations and demonstrate feasibility through solutions analysis and proof-of-concept development and testing. • Developing application performance monitoring to support reliable operation of enterprise services and applications. This will include expanding monitoring of enterprise applications to improve modeling results and end user performance. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase of +$0.111 from FY 2023 to FY 2024 is due to increased support on technical contracts for cybersecurity network infrastructure capacity planning.			
Accomplishments/Planned Programs Subtotals	4.101	4.085	4.190

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• PE 0302019K: *Operation & Maintenance, Defense-Wide*	-	-	-	-	-	-	-	-	-		

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*

D. Acquisition Strategy

Enterprise Wide Systems Engineering (EWSE) uses contractors to assist/supplement the Government lead/team for technical activities. Subject matter experts in both large and small businesses are sought for the engineering support. Firm fixed price contracts with one option year are typically used in open competition. Furthermore, technical work with Federally Funded Research and Development Centers (FFRDCs) such as MITRE and MIT Lincoln Lab are established and coordinated when the Government can leverage their expertise and R&D in the key technology.

Modeling and Simulation uses a range of contractors for modeling support to the various projects. Contractors range from small to large business, predominantly using open competition methods and Firm Fixed Price (FFP) tasks and utilizing multi-year (base plus option years) contracts where possible. Support includes network modeling tool and processes development to adapt to ever-evolving DoD programs and projects, analyses, capacity planning, and network redesign using the models. Some specific support (e.g., integration with proprietary software) will require contracting with OPNET (e.g., sole source). Federally Funded Research and Development Centers (FFRDCs) are also considered depending upon the task.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 1	SS/FFP	OPNET Tech, Inc : Bethesda, MD	11.673	0.276	Feb 2022	0.276	Feb 2023	-		-		-	Continuing	Continuing	Continuing
Product Development 2	C/CPFF	APPTIS : Chantilly, VA	5.059	0.187	Feb 2022	0.187	Feb 2023	-		-		-	Continuing	Continuing	Continuing
Product Development 3	SS/FFP	Falls Church, VA : Falls Church, VA	1.312	-		-		-		-		-	0.000	1.312	-
Product Development 4	C/FFP	Booz Allen, Hamilton : McLean, VA	6.547	0.250	Feb 2022	0.250	Feb 2023	-		-		-	Continuing	Continuing	Continuing
Product Development 5	C/FFP	NRL : Washington, DC	0.100	-		-		-		-		-	0.000	0.100	-
Product Development 6	C/CPFF	Soliel, LLC : Reston, VA	3.862	-		-		-		-		-	0.000	3.862	-
Product Development 7	C/FFP	COMPTEL : Arlington, VA	2.805	-		-		-		-		-	0.000	2.805	-
Product Development 8	C/CPFF	COMPTEL : Arlington, VA	0.926	-		-		-		-		-	0.000	0.926	-
Product Development 9	C/CPFF	MIT Lincoln Labs : Cambridge, MA	13.299	-		-		-		-		-	0.000	13.299	-
Product Development 10	MIPR	Various : Various	11.144	-		-		-		-		-	0.000	11.144	-
Enterprise Wide Systems Engineering 11	C/FFP	Northrop Grumman : Fairfax, VA	1.784	-		-		-		-		-	0.000	1.784	-
Clear Sky Pilot	C/CPFF	AFRL Terremark : Various	24.083	-		-		-		-		-	0.000	24.083	-
Narus	C/CPFF	AFRL : Rome, NY	1.450	-		-		-		-		-	0.000	1.450	-
Cyber Accelerator	C/CPFF	DTIC : Alexandria, VA	7.516	-		-		-		-		-	0.000	7.516	-
Commercial Integration Demonstration	C/CPFF	DTIC : Alexandria, VA	2.750	-		-		-		-		-	0.000	2.750	-
Web Content Filtering: Perimeter Defense Integration	C/FFP	Oberon Associates : Ft. Meade, MD	1.854	-		-		-		-		-	0.000	1.854	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Host Based Security Ops Assessment	C/FFP	Summit Technologies, Inc : Ft Meade, MD	0.700	-		-		-		-		-	0.000	0.700	-
Secure Configuration Management Ops Assessment	C/FFP	Cyber Security research and Solutions Corp : Ft Meade	0.964	-		-		-		-		-	0.000	0.964	-
Product Development 11	C/CPFF	Johns Hopkins University Applied Physics : Laurel, MD	0.861	-		-		-		-		-	0.000	0.861	-
Engineering Technical Services	MIPR	Axom Technologies : Fort Meade	1.150	-		-		-		-		-	0.000	1.150	-
Requirements Analysis/ Program Management: Civilian Pay	MIPR	Various : Various	2.057	-		-		-		-		-	Continuing	Continuing	Continuing
Cloud Hosted Shared Services	C/FFP	Nisga's Data Systems LLC : Herndon, VA	1.350	-		-		-		-		-	0.000	1.350	-
Cloud/ Gateway Pilot	C/FFP	Alvarez and Associates : Tysons Corner, VA	0.304	-		-		-		-		-	0.000	0.304	-
Cloud/ Gateway Pilot	C/FFP	BY Light Professional IT Services : : Arlington, VA	0.413	-		-		-		-		-	0.000	0.413	-
DoDCAR	C/FFP	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
JINTACCs SW	C/FFP	Riverside : Riverside	-	-		-		1.171	Sep 2024	-		1.171	Continuing	Continuing	-
Eng Tech and Arch Support	C/FFP	Soliell LLC : Reston, Va	-	-		-		1.484		-		1.484	Continuing	Continuing	-
		Subtotal	103.963	0.713		0.713		2.655		-		2.655	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IP Network Modeling	SS/FFP	Riverbed : Bethesda, MD	5.099	2.036	Sep 2022	2.020	Sep 2023	0.943	Sep 2023	-		0.943	Continuing	Continuing	-
JCSS/JRSS Modeling	C/FFP	Booz Allen, Hamilton : McLean, VA	4.772	1.210	May 2022	1.210	May 2023	0.389	May 2023	-		0.389	Continuing	Continuing	-
JRSS Modeling	C/FFP	IPKEYS : Annapolis Junction, MD	0.373	-		-		-		-		-	0.000	0.373	-
E2E Performance	C/FFP	Booze Allen : Hamilton	1.808	-		-		0.124	Aug 2023	-		0.124	0.000	1.932	-
E2E Performance	C/FFP	Various : Various	1.706	0.142	Oct 2021	0.142	Oct 2022	0.079	Oct 2022	-		0.079	Continuing	Continuing	-
		Subtotal	13.758	3.388		3.372		1.535		-		1.535	Continuing	Continuing	N/A

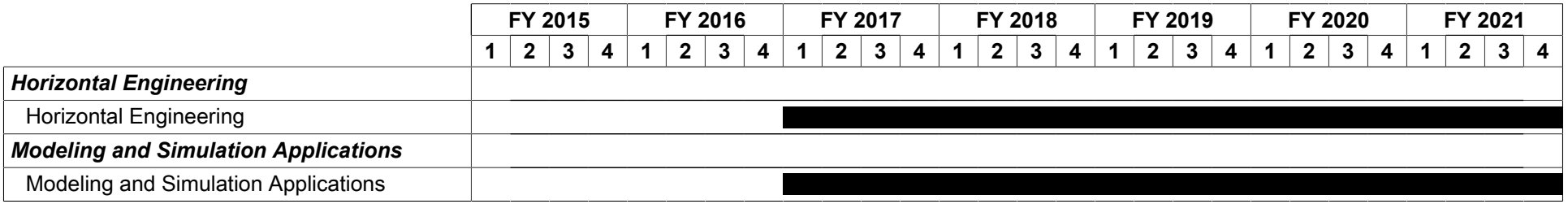
Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	SS/CPFF	Comptel : Arlington, VA	2.072	-		-		-		-		-	0.000	2.072	-
		Subtotal	2.072	-		-		-		-		-	0.000	2.072	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	119.793	4.101		4.085		4.190		-		4.190	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*



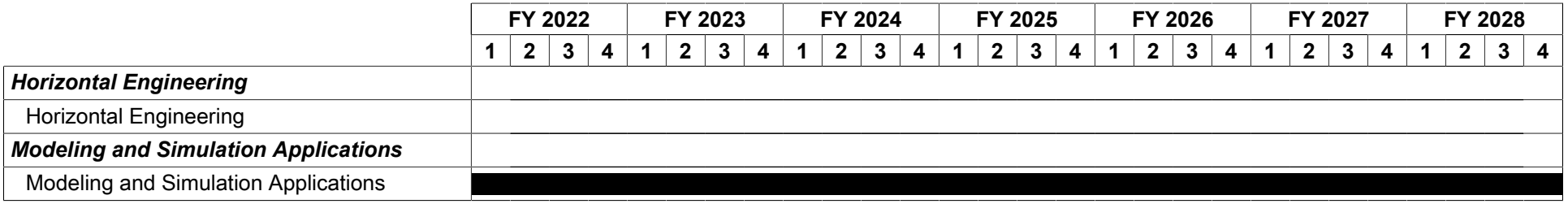


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Horizontal Engineering				
Horizontal Engineering	1	2017	4	2021
Modeling and Simulation Applications				
Modeling and Simulation Applications	1	2017	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency											Date: March 2023	
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*				Project (Number/Name) T62 / *DoD Information Network (DODIN) Systems Engineering and Support*			
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
T62: *DoD Information Network (DODIN) Systems Engineering and Support*	87.266	11.439	15.060	15.109	-	15.109	15.249	18.757	15.606	15.918	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD Information Network (DODIN) Systems Engineering and Support project identifies key technology areas that are essential to DISA including Machine Learning/ Artificial Intelligence (AI), Mobility, Assured Identity, Rapid Transition, Cyber Defense, among other technologies. Through the Emerging Technology Directorate (EM), this project ensures DISA's technical strategies align with the DoD IT Efficiency Strategy and the latest Department of Defense Chief Information Office (DoD CIO) Capabilities Planning Guidance (CPG). These strategies establish the foundation for DISA's technology investments and technical development. The EM leverages emerging technology to drive efficiencies and cost savings to the DoD, the Warfighter, and other Federal Agencies. The EM also provides decision-oriented information to the Secretary of Defense, Joint Staff, Military Services, Combatant Commands, and other mission partners.

Key support areas include:

Cyber Security and Cloud Computing: Cyber security and cloud computing present critical near-term challenges, especially the ability to securely leverage commercial cloud service offerings. The EM's partnership with Defense Advanced Research Projects Agency (DARPA) will assess and transition relevant and mature solutions. Solutions included are applications that detect and mitigate cyberattacks, routing capabilities, embedded system defense capabilities, and resilient network capabilities. A major ongoing effort is Quantum Resistant Cryptology (QRC), which use cryptography to authenticate and secure data-in-transit that is susceptible to attacks from a computer. This is needed to improve encryption of existing data transactions. DISA is working to address the impacts of the National Institute of Standards and Technology (NIST) selected QRC algorithms as they pertain to certificate transactions, which support performing digital signature operations.

Technology Assessments: Through partnerships with industry, academia, and the Federal sectors the EM produces requisite cyber measures and ensures optimal use of commercial cloud services. The EM will conduct technology assessments, process improvements, and analysis of potential technology to ensure consistency with DoDIN architecture and standards. Enabled by the Technology Assessment Framework (TAF) and the DISA Technology Information Repository (DTIR), the EM can perform "quick looks" and deeper evaluations of specific technologies to include:

- Advanced cloud management capabilities
- Physical containers (a stand-alone, executable unit of software) to enable mobile data
- Emerging open-source and/or global standards for storage services
- Analytic platform performance baselines of emerging commercial analytic platform products
- Advanced approaches to Continuity of Operations (COOP) in a hybrid cloud environment
- Next generation software defined networks for automating and virtualizing the DoDIN

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T62 / *DoD Information Network (DODIN) Systems Engineering and Support*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Department of Defense Information Network (DODIN) Systems Engineering and Support	11.439	15.060	15.109

Description: Through the Emerging Technology (EM) directorate, the DoDIN System Engineering and Support project conducts critical research, test, and evaluation of operationally enabling IT capabilities. The EM identifies and evaluates leading government and industry technologies, products, and methodologies to address mission critical requirements across DISA and the DoD. Additionally, the EM conducts technology assessments and integrations to provide scalable and cost-effective solutions to meet the unique operational and security requirements of the department.

Aligned to the DISA Strategic Plan Line of Effort #2: Drive Force Readiness through Innovation, EM facilitates collaboration among industry and government partners through technical exchange sessions, proof of concepts, operational pilot initiatives, and limited production deployments to validate the potential operational and financial benefits of solutions and capabilities. Additionally, the DoDIN Systems Engineering and Support project includes the Chief Technology Officer's Outlook and a Technology Watchlist. This Watchlist identifies key technology areas that are essential to DISA including Process/Automation, Cloud, Cyber Security, End-User Devices, and Communication (DoDIN, Mobile/End-User Devices).

FY 2023 Plans:
Key FY2023 efforts include:
• Quantum Resistant Cryptography (QRC): QRC is the cryptography used to authenticate and secure data-in-transit that is susceptible to attacks from a quantum computer.
o Prepare to adopt new quantum resistant algorithms to secure communications, protect data integrity, and digital signatures.
o Secure current and future cryptographic systems against quantum and classical computers by adopting new QRC encryption algorithms.
• Prototyping the National Institute of Standards and Technology (NIST) Post-Quantum Algorithms:
o Conduct prototyping activities to integrate the new NIST algorithms into the Public Key Infrastructure, which are tools used to create and manage keys for encryption.
o Assess the performance impact, computational overhead, and interoperability of NIST Quantum Resistant algorithms.
o Automate the inventory of the various versions of encryption configured and deployed on systems and networks to better understand our current posture.
• Operationalizing Artificial Intelligence (AI) for Defensive Cyber Ops (DCO):
o Deliver an initial AI-based cyber defense capability and will incorporate AI cyber defense models into current cyber defense systems. This will be completed by preparing cyber data to support AI model adoption, training the AI models on current DoDIN cyber defense data, validating the models, then integrating AI model outputs into current workflows.
o Conduct operational testing and validation of the effectiveness of these capabilities in supporting DISA's cyber defense.
• Next Generation Windows Data at Rest – Secret (NextGEN WINDAR-S):

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
o Evolve capabilities to meet new security requirements, address operational pain points, and appease end user desires. o Develop, test, and evaluate the next generation WINDAR-S solution in a limited operational proof of concept. This will ensure compliance with the latest NSA Commercial Solutions for Classified (CSfC) Mobile Access Capability Package (MACP) directives (the guidance from NSA to develop classified mobile solutions using commercial products). ***FY 2024 Plans:*** Key FY2024 efforts include: • Resistant Cryptography (QRC): o Continue prototyping activities for securing the backbone transport network using quantum resistant algorithms to secure encryption keys. o Explore Quantum Random Number generators that generate pre-shared encryption keys. This will ensure that data communication across the network remains secure and is resilient from quantum-based attacks. • Operationalizing Artificial Intelligence (AI) for Defensive Cyber Ops (DCO): o Optimize, scale, and institutionalize AI-based cyber defense capabilities for defending the DoDIN. o Extend capabilities to automate labeling and use of cyber data and implementing capabilities for continuously updating AI models with the latest cyber threat data. o Extend the AI models to simultaneously look across cyber data which will allow for the improvement of cyber threat detection and remediation. o Begin training the cyber defense workforce through the development of Concept of Operations (CONOPs), Training Tactics and Procedures (TTPs), and Standard Operation procedures (SOPs). • Next Generation Windows Data at Rest – Secret (NextGen WINDAR-S): o Fully roll out the NextGEN WINDAR-S solution into production. This will include capturing all the requirements for new infrastructure, end user devices, support personnel training, user guides, and new device on-boarding procedures. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase of +$0.049 from FY 2023 to FY 2024 is due to increased Quantum Resistant Cryptography (QRC) prototype testing to enable increased cyber security across the DoD. This funding will support the ability to conduct more robust prototype testing, to evaluate the Post-Quantum Certificate algorithms, and to adapt the current DoD Public Key Infrastructure (PKI) standards.			
Accomplishments/Planned Programs Subtotals	11.439	15.060	15.109

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency		Date: March 2023
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• O&M, DW/PE 0302019K: *Operation & Maintenance, Defense-Wide*	3.035	2.584	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Market research during the acquisition process includes a review of DISA contracts, other DoD contract vehicles, and other Federal Government agency contracts which are advertised for Government-wide usage. This market research also includes consideration of small businesses including minority/women owned (8A) businesses, Historically Black Colleges and Universities, mentor/protégé and other specialized contract vehicles and processes. Market research evaluates all contractors available from DISA sources for their ability to deliver the products specifically required for the unique program efforts. The program works collaboratively with vendors to obtain generic cost data for planning and analysis purposes. Past and current contract prices for similar work and other government-wide agency contracts provide additional sources of information. Quotes from multiple sources help provide averages for more realistic cost estimates. DISA makes a concerted effort to award many of its contracts to small businesses. Additionally, many of the DISA contracts are awarded with multiple option periods. These have the benefit of fixing labor costs over an extended period and minimizing the administrative costs associated with re-issuing short-term contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Services	FFRDC	MITRE : McLean, VA	15.243	0.877	Nov 2021	-		-		-		-	Continuing	Continuing	Continuing
Industry Tech Res	C/FFP	Gartner : Various	0.249	-		-		-		-		-	0.000	0.249	-
GIG Technical Insertion Engineering	C/FFP	SRA, Inc. : Fairfax, VA	1.211	-		-		-		-		-	0.000	1.211	-
Product Development	C/Various	Raytheon : Various	1.601	-		-		-		-		-	0.000	1.601	-
DAMA-C	MIPR	Defense Micro-electronics Activity : Various	11.794	-		-		-		-		-	0.000	11.794	-
Thin Engineering Support	MIPR	MIT Lincoln Labs : Lexington, MA	4.260	-		-		-		-		-	0.000	4.260	-
Engineering and Technical Support	C/FFP	Moya Technologies, Inc. : Various	1.212	-		-		-		-		-	0.000	1.212	-
Engineering Technical Services	MIPR	Various : Chambersburg, PA	7.366	-		-		-		-		-	Continuing	Continuing	Continuing
Product Development	C/FFP	Science and Technology Associates, Inc : Arlington, VA	2.091	-		-		-		-		-	0.000	2.091	-
Product Development	MIPR	SPAWAR : Charleston, SC	0.376	1.506	Mar 2022	1.300	Mar 2023	1.300	Mar 2024	-		1.300	Continuing	Continuing	Continuing
Product Development	MIPR	NSA : Ft. Meade, MD	0.691	-		-		-		-		-	0.000	0.691	-
Engineering Technical Services	C/FFP	TWM : Falls Church, VA	0.202	-		-		-		-		-	0.000	0.202	-
Product Development	C/FFP	SOLERS : Arlington, VA	3.023	-		-		-		-		-	0.000	3.023	-
Product Development	C/FFP	Booz Allen Hamilton : McLean, VA	1.062	-		-		-		-		-	0.000	1.062	-
Product Development	MIPR	JITC : Ft. Meade, MD	0.351	-		-		-		-		-	0.000	0.351	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	MIPR	Various : Ft. Meade, MD	4.481	-		-		-		-		-	0.000	4.481	-
Engineering Technical Services	C/Various	IV2: IT Consulting Services, LLC : Jackson, WY	1.674	-		-		-		-		-	0.000	1.674	-
Engineering Technical Services	C/FFP	Information Assurance TWM Follow On : Various	0.741	-		-		-		-		-	0.000	0.741	-
Engineering Technical Services	C/CPFF	TIE NEMS: B&D Consulting : Various	0.564	-		-		-		-		-	0.000	0.564	-
Engineering Technical Services	C/Various	Tapestry Technologies, INC : Various	3.173	-		-		-		-		-	0.000	3.173	-
Management Services - Civilian Pay	Various	Various : Ft. Meade, MD	6.428	-		-		-		-		-	0.000	6.428	-
Engineering Technical Services	C/FFP	PMPC-Itility LLC : Ft. Meade, MD	0.807	-		-		-		-		-	Continuing	Continuing	Continuing
Information Assurance	C/CPFF	Tapestry Tech : Chambersburg, PA	1.783	1.267	Dec 2021	1.245	Jan 2023	1.245	Jan 2024	-		1.245	Continuing	Continuing	Continuing
Sys Engineering	C/CPFF	Various : Ft. Meade, MD	12.029	1.263	Mar 2022	4.786	Nov 2022	4.926	Nov 2023	-		4.926	Continuing	Continuing	Continuing
Management Services - Civilian Pay	C/CPFF	Various : Ft. Meade	4.084	4.161	Nov 2021	5.651	Oct 2022	-		-		-	Continuing	Continuing	Continuing
Program Management and Knowledge Management	C/FFP	TBD : TBD	-	1.659	Mar 2022	1.129	Jan 2023	-		-		-	Continuing	Continuing	Continuing
(DODIN) Systems Engineering and Support	C/FFP	TBD : TBD	0.770	0.706	Mar 2022	0.949	Mar 2023	-		-		-	Continuing	Continuing	Continuing
Management Service	C/CPFF	Various : Ft. Meade Md	-	-		-		5.560	Oct 2023	-		5.560	Continuing	Continuing	-
Program Management	C/FFP	TBD : TBD	-	-		-		1.129		-		1.129	Continuing	Continuing	-
(DODIN) Systems	C/FFP	TBD : TBD	-	-		-		0.949		-		0.949	Continuing	Continuing	-
		Subtotal	87.266	11.439		15.060		15.109		-		15.109	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
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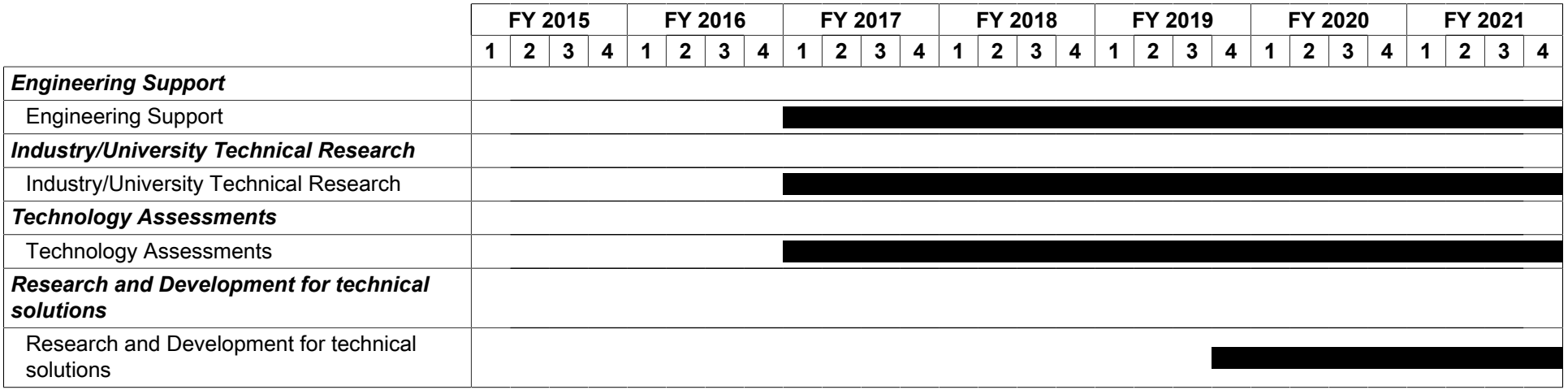
	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	87.266	11.439		15.060		15.109		-		15.109	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T62 / *DoD Information Network (DODIN) Systems Engineering and Support*



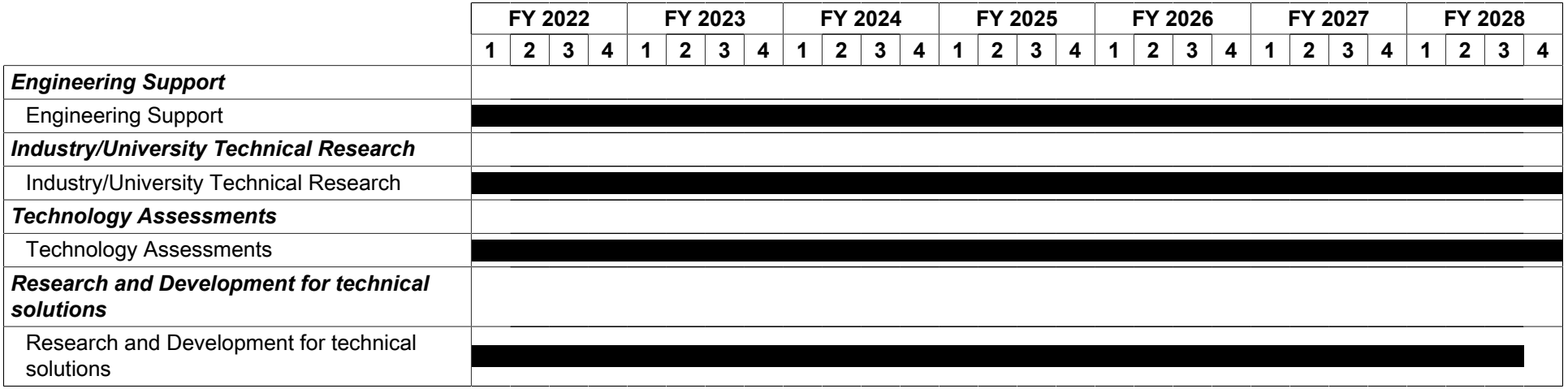


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T62 / *DoD Information Network (DODIN) Systems Engineering and Support*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Engineering Support				
Engineering Support	1	2017	4	2028
Industry/University Technical Research				
Industry/University Technical Research	1	2017	4	2028
Technology Assessments				
Technology Assessments	1	2017	4	2028
Research and Development for technical solutions				
Research and Development for technical solutions	4	2019	3	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	Project (Number/Name) T-0010 / *Enterprise Messaging*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
T-0010: *Enterprise Messaging*	0.000	2.135	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Enterprise Messaging (EM) is an infrastructure service providing standardized mechanisms to exchange critical and globally visible data between applications/machines and provides the infrastructure for joint information sharing across the entire DoD. DISA Tasking Order (DTO) 15-544: Cybersecurity Risk Management Data Sharing mandates use of EM for messaging-to-messaging (M2M) data exchanges.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Enterprise Messaging (EM) ***Description:*** Define and deploy a distributed EM capability that is highly available, secure, and scalable with redundancy, built-in self-recovery, and zero downtime for updates for the next major version of the EM capability.	2.135	-	-
Accomplishments/Planned Programs Subtotals	2.135	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Information Systems Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T-0010 / *Enterprise Messaging*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	C/FFP	TBD : TBD	-	2.135	Jul 2022	-		-		-		-	Continuing	Continuing	-
		Subtotal	-	2.135		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	2.135		-		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T-0010 / *Enterprise Messaging*

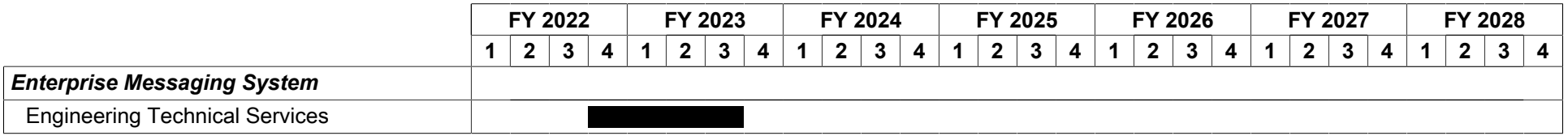


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Information Systems Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T-0010 / *Enterprise Messaging*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Enterprise Messaging System				
Engineering Technical Services	4	2022	3	2023