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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Defense Information Systems Agency **Date:** May 2021

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
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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	179.181	10.798	16.324	16.233	-	16.233	-	-	-	-	Continuing	Continuing
E65: Modeling and Simulation	107.075	2.109	4.068	4.101	-	4.101	-	-	-	-	Continuing	Continuing
T62: DoD Information Network (DODIN) Systems Engineering and Support	72.106	8.689	12.256	9.997	-	9.997	-	-	-	-	Continuing	Continuing
T-0010: Enterprise Messaging	0.000	0.000	0.000	2.135	-	2.135	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Infrastructure Engineering and Integration effort encompasses two projects: Modeling and Simulation and DoD Information Network (DODIN) Systems Engineering and Support. There are two major activities under the Modeling and Simulation project: Modeling and Simulation and DODIN Enterprise Wide Systems Engineering (EWSE).

The DODIN EWSE activity resolves near term (one to three years) high-priority technical issues defined by DoD Chief Information Officer (DoD CIO) and Defense Information Systems Agency (DISA), that impact operational capabilities affecting DODIN End-to-End (E2E) interoperability and performance.

The Modeling and Simulation project provides architecture, systems engineering and E2E analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include DoD CIO, the DISA Network Services Directorate, the DISA Enterprise Services Directorate, Program Executive Office-Mission Assurance, the Defense Information Systems Network Command Center and Joint Communications Simulation System users in DoD.

The DODIN Systems Engineering and Support project performs discovery, research, development and experimentation of emerging and commercial technologies through the Office of the Chief Technology Officer (OCTO) Emerging Technology Directorate (EM) (formerly OCTO) to fill capability shortfalls and technology gaps across the Future Years Defense Program (FYDP). EM identifies these gaps/shortfalls, pursues leading innovative solutions from industry, academia, and the Federal sector, and engages industry partners for commercial best practices. EM conducts technical system engineering reviews and oversight of DISA and DoD enterprise products and services. EM resolves mission partner gaps and agency challenges requiring technical and/or process innovation in Machine Learning/Artificial Intelligence (AI), Mobility, Assured Identity, Rapid Transition, Cyber Defense, and Blockchain among other technologies.

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>
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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	10.798	16.324	16.538	-	16.538
Current President's Budget	10.798	16.324	16.233	-	16.233
Total Adjustments	0.000	0.000	-0.305	-	-0.305
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustment	-	-	-0.305	-	-0.305

Change Summary Explanation

The decrease of -\$0.305 in FY 2022 is due a reduction in technical contract support.

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>
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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
<i>E65: Modeling and Simulation</i>	107.075	2.109	4.068	4.101	-	4.101	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Modeling and Simulation project provides architecture, systems engineering and end-to-end (E2E) analytical functions for the Defense Information Systems Agency (DISA) and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Modeling and Simulation activities support the Department of Defense (DoD) communications planning and investment strategy, including: application performance assessments, contingency planning, network capacity planning and diagnostics, and systems-level modeling and simulation. Project efforts provide across-theater information awareness for Combatant Commands through application solutions for integrated networks, including DoD’s missions in Afghanistan and the Defense Information Systems Network (DISN) by: (1) supporting the development and implementation of DoD Information Network (DODIN) Enterprise Wide Systems Engineering (EWSE) processes essential to evolving the DODIN in a manner that enables interoperability and E2E performance for critical DODIN programs; (2) developing standardized DISA systems analyses and integration processes to improve systems integration across DISA for all DISA developed communication systems and services; and (3) providing the underlying modeling and simulation and analytical support for E2E DISA and DoD systems engineering and assessment.

Project efforts provide DoD decision makers with services and a suite of tools capable of identifying key points of impact on DoD command and control information systems and recommending trade-offs within the DODIN configuration with regard to prioritized performance, availability, and security. This effort will reduce the risk in products deployed to the warfighter through improved network performance and traffic analysis, and an efficient means of troubleshooting and subsequent redesign.

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

	FY 2020	FY 2021	FY 2022
Title: Modeling and Simulation	2.109	4.068	4.101
Description: The Modeling and Simulation project provides architecture, systems engineering and end-to-end (E2E) analytical functions for the Defense Information Systems Agency (DISA) and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Modeling and Simulation activities support the Department of Defense (DoD) communications planning and investment strategy, including: application performance assessments, contingency planning, network capacity planning and diagnostics, and systems-level modeling and simulation. Project efforts provide across-theater information awareness for Combatant Commands through application solutions for integrated networks, including DoD’s missions in Afghanistan and the Defense Information Systems Network (DISN) by: (1) supporting the development and implementation of DoD Information Network (DODIN) Enterprise Wide Systems Engineering (EWSE) processes essential to evolving the DODIN in a manner that enables interoperability and E2E performance for critical DODIN programs; (2) developing standardized DISA systems analyses and integration processes to improve systems integration across DISA for all DISA developed communication systems and services; and (3) providing the underlying modeling and simulation and analytical support for E2E DISA and DoD systems engineering and assessment.			

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p><i>FY 2021 Plans:</i> Revision of DoD Cybersecurity Analysis and Review (DoDCAR) analysis tools and testing of implementations of DoDCAR based cyber architecture and system assessment methods. This effort will develop add Mil-Cloud networking, and the evaluation of network security solutions. Will expand the testing of Mil-Cloud access point solutions with government and contracted labor support. Will perform additional product and solution testing. Will evaluate performance monitoring framework to support reliable operation of enterprise services and applications. This task will develop continued assessment, testing, prototype improvement and implementation of DoDCAR processes. This includes portfolio management against threat coverage of DoD Networks. Will continue fielding modeling tools integrated with the DISN for automated DISN views and troubleshooting tools. Will develop modeling and simulation tools to analyze planned changes to the DISN optical and IP core network, data centers, internet and commercial cloud computing gateways, and network security solutions. Will develop capabilities for analysis of software defined networking. Will perform test and evaluation of DISN Internet Access Point security solutions with government and contracted labor support. Will research technologies and solutions that can be transitioned to operations and will demonstrate feasibility through solutions analysis and proof-of-concept development and test. Will perform product and solution assessments using developed modeling tools to provide technical solutions for IT capabilities to ensure compatibility and interoperability with the DISN, on-premise and cloud data centers, and JIE solution architectures. Will develop application performance monitoring to support reliable operation of enterprise services and applications.</p> <p><i>FY 2022 Plans:</i> Will continue fielding modeling tools integrated with the DISN for automated DISN views and troubleshooting tools and begin migration to cloud based development and monitoring tools. Will develop modeling and simulation tools to analyze planned changes to the DISN optical and IP core network, data centers, internet and commercial cloud computing gateways, universal gateways, enterprise services, and network security solutions. Will develop capabilities for analysis of software defined networking. Will perform test and evaluation of DISN Internet Access Point security solutions with government and contracted labor support. Will research technologies and solutions that can be transitioned to operations and will demonstrate feasibility through solutions analysis and proof-of-concept development and test. Will perform product and solution assessments using developed modeling tools to provide technical solutions for IT capabilities to ensure compatibility and interoperability with the DISN, on-premise and cloud data centers, and JIE solution architectures. Will develop application performance monitoring to support reliable operation of enterprise services and applications.</p> <p><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> The increase of +\$0.033 from FY 2021 to FY 2022 is due to additional efforts to develop and test cloud defensive cyber operations performance metrics.</p>			
Accomplishments/Planned Programs Subtotals	2.109	4.068	4.101

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0302019K: <i>Operation & Maintenance, Defense-Wide</i>	16.579	16.911	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency **Date:** May 2021

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
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 1	SS/FFP	OPNET Tech, Inc : Bethesda, MD	10.245	0.218	Feb 2020	0.276	Feb 2021	0.276	Feb 2022	-		0.276	Continuing	Continuing	Continuing
Product Development 2	C/CPFF	APPTIS : Chantilly, VA	3.851	0.087	Feb 2020	0.187	Feb 2021	0.187	Feb 2022	-		0.187	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	5.193	0.170	Feb 2020	0.250	Feb 2021	0.250	Feb 2022	-		0.250	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	11.268	-		-		-		-		-	0.000	11.268	-
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	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency **Date:** May 2021

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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
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	1.537	0.520	Feb 2020	-		-		-		-	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	-
Subtotal			99.577	0.995		0.713		0.713		-		0.713	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency **Date:** May 2021

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
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Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IP Network Modeling	SS/FFP	Riverbed : Bethesda, MD	2.073	0.588	Sep 2020	1.504	Sep 2021	2.036	Sep 2022	-		2.036	Continuing	Continuing	-
JCSS/JRSS Modeling	C/FFP	Booz Allen, Hamilton : McLean, VA	2.377	0.251	May 2020	1.210	May 2021	1.210	May 2022	-		1.210	Continuing	Continuing	-
JRSS Modeling	C/FFP	IPKEYS : Annapolis Junction, MD	0.373	-		-		-		-		-	0.000	0.373	-
E2E Performance	C/FFP	Tapestry : Chambersburg, PA	0.251	-		0.499	Oct 2020	-		-		-	0.000	0.750	-
E2E Performance	C/FFP	Various : Various	0.352	0.275	Oct 2019	0.142	Oct 2020	0.142	Oct 2021	-		0.142	Continuing	Continuing	-
Subtotal			5.426	1.114		3.355		3.388		-		3.388	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	SS/CPFF	Comptel : Arlington, VA	2.072	-		-		-		-		-	0.000	2.072	-
Subtotal			2.072	-		-		-		-		-	0.000	2.072	N/A

Project Cost Totals	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
	107.075	2.109	4.068	4.101	-	4.101	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Horizontal Engineering</i>	
Horizontal Engineering	
<i>Modeling and Simulation Applications</i>	
Modeling and Simulation Applications	

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Horizontal Engineering</i>	
Horizontal Engineering	
<i>Modeling and Simulation Applications</i>	
Modeling and Simulation Applications	

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Horizontal Engineering</i>				
Horizontal Engineering	1	2017	4	2026
<i>Modeling and Simulation Applications</i>				
Modeling and Simulation Applications	1	2017	4	2026

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Defense Information Systems Agency										Date: May 2021		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>				Project (Number/Name) T62 / <i>DoD Information Network (DODIN) Systems Engineering and Support</i>			
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
T62: <i>DoD Information Network (DODIN) Systems Engineering and Support</i>	72.106	8.689	12.256	9.997	-	9.997	-	-	-	-	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 for Defense Information Systems Agency (DISA) including: Machine Learning/Artificial Intelligence (AI), Mobility, Assured Identity, Rapid Transition, Cyber Defense, and Blockchain among other technologies.

The DODIN Systems Engineering and Support Project ensure the technical strategies for the Defense Information Systems Agency (DISA) are in line with the DoD IT Efficiency strategy and the latest Department of Defense Chief Information Office (DoD CIO) Capabilities Planning Guidance (CPG) through the Emerging Technology Directorate (EM). These strategies will 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, and provides actionable, decision-oriented information to the Secretary of Defense, Joint Staff, Military Services, Combatant Commands, and other mission partners in satisfying DoD mission objectives.

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 technologically relevant and mature solutions. Included are applications with a security wrapper that detect and mitigate cyberattacks; smart routing and managed reputation capability; embedded system defense capabilities; and resilient and intrusion-tolerant network capabilities.

Partnerships with industry, academia, and the Federal sectors will produce requisite cyber measures and ensure optimal use of commercial cloud services. The EM will conduct technology assessments, process improvements, as well as the analysis and review of potential technology solutions, products, capabilities and services to ensure consistency with DODIN architecture and standards. Enabled by the Technology Assessment Framework (TAF) and the DISA Technology Information Repository (DTIR), the EM will perform "quick looks" and deeper technology evaluations to provide critical awareness, characterization, and suitability of specific technologies. These include the assessments of advanced cloud management capabilities; physical containers to enable mobile data center; emerging open source Storage Service Application Programming Interfaces (APIs) and/or abstractions and 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; and the next generation software defined networks for automating and virtualizing the DODIN.

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

	FY 2020	FY 2021	FY 2022
Title: Department of Defense Information Network (DODIN) Systems Engineering and Support	8.689	12.256	9.997

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p>Description: The DoD Information Network (DODIN) Systems Engineering and Support project aligns with the updated DISA Strategic Plan, which includes the Chief Technology Officer’s Outlook and a Technology Watchlist. The Watchlist identifies key technology areas that are essential for Defense Information Systems Agency (DISA) including: Process/Automation, Cloud, Cyber Security, End-User Devices, and Communication (DODIN, Mobile/End-User Devices). The DODIN Systems Engineering and Support Project ensure the technical strategies for the Defense Information Systems Agency (DISA) are in line with the DoD IT Efficiency strategy and the latest Department of Defense Chief Information Office (DoD CIO) Capabilities Planning Guidance (CPG) through the Office of the Chief Technology Officer (OCTO). These strategies will establish the foundation for DISA’s technology investments and technical development. The OCTO leverages emerging technology to drive efficiencies and cost savings to the DoD, the Warfighter, and other Federal Agencies, and provides actionable, decision-oriented information to the Secretary of Defense, Joint Staff, Military Services, Combatant Commands, and other mission partners in satisfying DoD mission objectives.</p> <p>Cyber security and cloud computing present critical near term challenges, especially the ability to securely leverage commercial cloud service offerings. The OCTO’s partnership with Defense Advanced Research Projects Agency (DARPA) will assess and transition technologically relevant and mature solutions. Included are applications with a security wrapper that detect and mitigate cyberattacks; smart routing and managed reputation capability; embedded system defense capabilities; and resilient and intrusion-tolerant network capabilities.</p> <p>Partnerships with industry, academia, and the Federal sectors will produce requisite cyber measures and ensure optimal use of commercial cloud services. The OCTO will conduct technology assessments, process improvements, as well as the analysis and review of potential technology solutions, products, capabilities and services to ensure consistency with DODIN architecture and standards. Enabled by the Technology Assessment Framework (TAF) and the DISA Technology Information Repository (DTIR), the OCTO will perform “quick looks” and deeper technology evaluations to provide critical awareness, characterization, and suitability of specific technologies. These include the assessments of advanced cloud management capabilities; physical containers to enable mobile data center; emerging open source Storage Service Application Programming Interfaces (APIs) and/or abstractions and 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; and the next generation software defined networks for automating and virtualizing the DODIN. The Agency’s internal innovation suggestion program, DISAruptive, previously resourced by available government civilian time, will be revamped in FY2019 with relaunch by FY20 to deliver technical expertise and including training for potential innovators and innovation suggestion technical support including limited test conduct, instrumentation, or test materials.</p> <p>FY 2021 Plans: Identify and deliver innovative processes, services, and capabilities across all facets of DISA’s operating model. Accelerate the transition of emerging technology through collaboration, outreach, and cooperative research and development agreements</p>			

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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DODIN) Systems Engineering and Support</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p>(CRADA's) among agency, mission, and industry partners. Work with mission partners to discover, test, and deploy appropriate technological solutions/processes, including efforts in development, security and operations (DevSecOps), Next-Generation Endpoint, Machine Learning/Artificial Intelligence (AI), Assured Identity, Universal Transport, Internet Browser Isolation, Blockchain, Commercial Solutions for Classified (CSfC) , SIPR/NIPR Single Device and Multiple Access Reduced Sign-on. Further Operationalize DISAruprive enhancements, continue training support curriculum, and enhance R&D support to innovative ideas received through the DISAruprive portal.</p> <p>FY 2022 Plans: Work with mission partners to discover, test, and deploy appropriate technology solutions/processes, including efforts in Multi-Class Mobile endpoint, End-User Devices, Assured Identity, Machine Learning/Artificial Intelligence (AI), Cyber Defense, Cloud Computing, and Process Automation. Perform discovery, research, development and experimentation of emerging and commercial technologies to fill capability shortfalls and technology gaps across the Future Years Defense Program (FYDP). Collaborate and influence commercial leaders in innovative technology and practices in an effort to guide the Department towards the 21st century warfighting Domain. Pursue leading innovative solutions from industry, academia, and the Federal sector, and engage industry partners for commercial best practices. Conduct technical system engineering reviews and oversight of DISA and DoD enterprise products and services. Further Operationalize DISAruprive enhancements, continue training support curriculum, and enhance R&D support to innovative ideas received through the DISAruprive portal.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: The decrease of -\$2.259 from FY 2021 to FY 2022 is due to a reduction in technology research partnerships with Universities, and University affiliations, in order to develop deeper expertise in fewer core technology areas (-\$0.124) and a realignment of -\$2.135 to a establish the ISO ST-0100 project that will be moving to Operation & Maintenance in FY 2022.</p>			
Accomplishments/Planned Programs Subtotals	8.689	12.256	9.997

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M, DW/PE	2.899	2.962	3.035	-	3.035	-	-	-	-	-	Continuing
0302019K: <i>Operation & Maintenance, Defense-Wide</i>											Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DODIN) Systems Engineering and Support</i>

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency **Date:** May 2021

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
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Services	FFRDC	MITRE : McLean, VA	14.233	0.505	Oct 2019	0.505	Oct 2020	0.671	Nov 2021	-		0.671	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	4.399	1.000	Jan 2020	1.967	Jan 2021	-		-		-	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	-		-		1.300	Mar 2022	-		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	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency												Date: May 2021			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 7				PE 0302019K / Defense Info. Infrastructure Engineering and Integration				T62 / DoD Information Network (DODIN) Systems Engineering and Support							
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	MIPR	Various : Ft. Meade, MD	4.481	-		-		-		-		-	0.000	4.481	-
Engineering Technical Services	C/Variou	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/Variou	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	0.583	0.600	Jan 2020	0.600	Jan 2021	1.061	Dec 2021	-		1.061	Continuing	Continuing	Continuing
Sys Engineering	C/CPFF	Various : Ft. Meade, MD	4.911	4.897	Mar 2020	5.114	Dec 2020	1.057	Mar 2022	-		1.057	Continuing	Continuing	Continuing
Management Services - Civilian Pay	C/CPFF	Various : Ft. Meade	1.989	1.417	Oct 2019	3.570	Mar 2021	3.955	Nov 2021	-		3.955	Continuing	Continuing	Continuing
Program Management and Knowledge Management	C/FFP	TBD : TBD	-	-		-		1.453	Mar 2022	-		1.453	Continuing	Continuing	Continuing
(DODIN) Systems Engineering and Support	C/FFP	TBD : TBD	-	0.270	Mar 2020	0.500	Mar 2021	0.500	Mar 2022	-		0.500	Continuing	Continuing	Continuing
Subtotal			72.106	8.689		12.256		9.997		-		9.997	Continuing	Continuing	N/A
Project Cost Totals			72.106	8.689		12.256		9.997		-		9.997	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Defense Information Systems Agency							Date: May 2021			
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>			Project (Number/Name) T62 / <i>DoD Information Network (DODIN) Systems Engineering and Support</i>				
	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Defense Information Systems Agency		Date: May 2021
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

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Technical Direction Agent (TDA)	
Technical Direction Agent (TDA)	
Engineering Support	
Engineering Support	
Industry/University Technical Research	
Industry/University Technical Research	
Technology Assessments	
Technology Assessments	
DISA Ruptive	
DISA Ruptive	
Research and Development for technical solutions	
Research and Development for technical solutions	

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Technical Direction Agent (TDA)	
Technical Direction Agent (TDA)	
Engineering Support	
Engineering Support	
Industry/University Technical Research	
Industry/University Technical Research	
Technology Assessments	
Technology Assessments	

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Defense Information Systems Agency **Date:** May 2021

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
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	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>DISA Ruptive</i>																												
DISA Ruptive																												
<i>Research and Development for technical solutions</i>																												
Research and Development for technical solutions																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DODIN) Systems Engineering and Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Technical Direction Agent (TDA)				
Technical Direction Agent (TDA)	1	2017	4	2024
Engineering Support				
Engineering Support	1	2017	4	2024
Industry/University Technical Research				
Industry/University Technical Research	1	2017	4	2024
Technology Assessments				
Technology Assessments	1	2017	4	2024
DISA Ruptive				
DISA Ruptive	4	2020	3	2025
Research and Development for technical solutions				
Research and Development for technical solutions	4	2019	3	2025

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Defense Information Systems Agency **Date:** May 2021

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T-0010 / <i>Enterprise Messaging</i>
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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
T-0010: <i>Enterprise Messaging</i>	0.000	0.000	0.000	2.135	-	2.135	-	-	-	-	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 2020	FY 2021	FY 2022
Title: Enterprise Messaging (EM)	0.000	-	2.135
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.			
FY 2022 Plans: Build the test environments on Secure Internet Protocol Router/Non-Secure Internet Protocol Router (SIPR/NIPR) and developing new Enterprise Messaging technology to replace the current deployed systems. These systems will run in parallel until fully operational capability (FOC) is achieved. To achieve FOC an operational assessment of the new infrastructure, software, security requirements, and user functional testing will be completed.			
FY 2021 to FY 2022 Increase/Decrease Statement: The increase of +\$2.135 from FY 2021 to FY 2022 will be used for support, new infrastructure, software, testing, and to establish a robust risk management process that meets federal agency information security standards and achieve Full Operational Capability (FOC) of Enterprise Messaging (EM) Version 5.0 (EM V5.0) for JEON ST-0010. EM is an automated machine to machine messaging system which automatically communicates DoD system status and other operational information across DoD networks. Data is used to evaluate the readiness and capability of U.S. armed forces to carry out assigned and potential tasks. This JEON project will be moving to Operation & Maintenance in FY 2022.			
Accomplishments/Planned Programs Subtotals	0.000	-	2.135

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

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T-0010 / <i>Enterprise Messaging</i>

D. Acquisition Strategy
N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T-0010 / <i>Enterprise Messaging</i>

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Enterprise Messaging System	
Engineering Technical Services	██████████

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Defense Information Systems Agency		Date: May 2021
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T-0010 / <i>Enterprise Messaging</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Enterprise Messaging System</i>				
Engineering Technical Services	4	2022	3	2023