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

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	145.582	20.059	16.121	15.798	-	15.798	16.226	16.453	16.787	17.000	Continuing	Continuing
E65: *Modeling and Simulation*	92.243	11.409	4.343	3.896	-	3.896	4.071	4.154	4.243	4.322	Continuing	Continuing
T62: *DoD Information Network (DODIN) Systems Engineering and Support*	53.339	8.650	11.778	11.902	-	11.902	12.155	12.299	12.544	12.678	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) to fill capability shortfalls and technology gaps across the Future Years Defense Program (FYDP). The OCTO identifies these gaps/shortfalls, pursues leading innovative solutions from industry, academia, and the Federal sector, and engages industry partners for commercial best practices. The OCTO Develops technology forecasts and innovation roadmaps for existing and nascent DISA Programs in the following areas: Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DODIN/Mobile/End-User Devices). The OCTO conducts technical system engineering reviews and oversight of DISA and DoD enterprise products and services. The OCTO performs early identification of technology needs and explores, develops, and delivers recommended emerging technologies to the DISA Requirements & Analysis Office.

Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Information Systems Agency					Date: March 2019
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*		
B. Program Change Summary ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**
Previous President's Budget	21.564	16.561	15.719	-	15.719
Current President's Budget	20.059	16.121	15.798	-	15.798
Total Adjustments	-1.505	-0.440	0.079	-	0.079
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.634	-0.440			
• Adjustment	-0.871	-	0.079	-	0.079

Change Summary Explanation

The decrease in FY 2018 reflects a transfer of funding to Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs (-$0.634) and due to completion of the major phases of two projects, QUICKWIN and LIFI. QUICKWIN delivered tablets with the same DISANet office automation solution, functionality, and security as DISANet laptops, including implementation of the DoD PKI Purebred derived credential concept instead of CAC cards, with key attestation and root of trust (RoT) (-$0.871).

The decrease in FY 2019 reflects a transfer of funding to Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs (-$0.440).

The increase of +$0.079 in FY 2020 is due to the expansion of technical system engineering reviews and oversight of DISA and DoD enterprise products and services for Return on Investment (ROI) analysis, analysis of alternatives, and mission partner support.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency			Date: March 2019
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 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
E65: *Modeling and Simulation*	92.243	11.409	4.343	3.896	-	3.896	4.071	4.154	4.243	4.322	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 2018	FY 2019	FY 2020
Title: Modeling and Simulation	11.409	4.343	3.896
FY 2019 Plans: Will develop modeling and simulation tools to analyze planned changes to the DISN optical and Internet Protocol (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, data centers, and JIE solution architectures. Will develop application performance monitoring framework to support reliable operation of enterprise services and applications.			
FY 2020 Plans: Will provide architecture and model development to Cyber Development architecture for developing future DODIN cyber architecture and cyber portfolio management. This task will develop DoD Cybersecurity Analysis and Review (DoDCAR) analysis			

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency		Date: March 2019
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 2018	FY 2019	FY 2020
tools for implementing DoDCAR based cyber architecture and system assessment methods. This effort 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, data centers, and JIE solution architectures. Will develop application performance monitoring framework to support reliable operation of enterprise services and applications. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** The decrease of -$0.447 is due to the completion of pilot assessments on innovative and emerging technologies.			
Accomplishments/Planned Programs Subtotals	11.409	4.343	3.896

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• PE 0302019K: *Operation & Maintenance, Defense-Wide*	15.606	16.437	16.579	-	16.579	16.911	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

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 OSD/DISA 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). FFRDCs are also considered depending upon the task.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency		Date: March 2019
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*

E. Performance Metrics

DISN core transport bandwidth sufficiency, tied to capacity planning and activation of bandwidth in the DISN optical core to keep at least 25% spare capacity, to allow for provisioning of unforeseen requirements and rerouting under outages.

DISN IP Core bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of DISN IP Core and NIPRNet backbone circuits under 65% during daily peak periods.

DISN SIPRNet bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of SIPRNet backbone circuits under 50% during daily peak periods.

The EWSE projects will be measured by the number of technical studies performed with associated systems engineering artifacts (market research reports, technology assessments, solutions analyses, etc.) that are developed to support DODIN capabilities; and the number of proof-of-concept demonstrations or pilots executed to support viability of the technical approach/recommendation. These products will be coordinated with the stakeholders, users and/or Program Management Offices (PMO) to ensure EWSE provides the right deliverables for solution development decisions.

FY 2018 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations. / Actual: Completed 2 technical studies, 6 engineering artifacts and 2 concept demonstrations.
FY 2019 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.
FY 2020 planned target: Will complete 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.

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 Enterprise Activities, the DODIN and DISA applications, as well as engineering capabilities support to programs and projects to address technical and engineering solutions to activities such as information assurance and cyber security; mobility and cloud technologies and warfighter and mission support activities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency			Date: March 2019
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 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 1	SS/FFP	OPNET Tech, Inc : Bethesda, MD	8.506	1.449	Aug 2018	0.342	Oct 2018	0.124	Feb 2020	-		0.124	Continuing	Continuing	Continuing
Product Development 2	C/CPFF	APPTIS : Chantilly, VA	1.822	1.812	Aug 2018	0.418	Oct 2018	-		-		-	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	4.333	0.648	Aug 2018	0.250	Oct 2018	0.120	Feb 2020	-		0.120	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	11.439	1.860	Dec 2017	-		-		-		-	0.000	13.299	-
Product Development 10	MIPR	Various : Various	9.501	1.767	Dec 2017	-		-		-		-	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	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency			Date: March 2019
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 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 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	0.450	0.350	Oct 2017	0.141	Oct 2018	-		-		-	0.000	0.941	-
Engineering Technical Services	MIPR	Axom Technologies : Fort Meade	0.502	0.478	Oct 2017	0.201	Oct 2018	-		-		-	0.000	1.181	-
Requirements Analysis/ Program Management: Civilian Pay	MIPR	Various : Various	1.445	0.092	Oct 2017	0.072	Oct 2018	0.520	Feb 2020	-		0.520	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	-
		Subtotal	90.171	8.456		1.424		0.764		-		0.764	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IP Network Modeling	SS/FFP	Riverbed : Bethesda, MD	-	1.056	Sep 2018	1.200	Sep 2019	1.576	Sep 2020	-		1.576	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency			Date: March 2019
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 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JCSS/JRSS Modeling	C/FFP	Booz Allen, Hamilton : McLean, VA	-	1.131	May 2018	1.471	May 2019	1.323	May 2020	-		1.323	Continuing	Continuing	-
JRSS Modeling	C/FFP	IPKEYS : Annapolis Junction, MD	-	0.373	Mar 2018	-		-		-		-	0.000	0.373	-
E2E Performance	C/FFP	Tapestry : Chambersburg, PA	-	0.251	Mar 2018	-		-		-		-	0.000	0.251	-
E2E Performance	C/FFP	Various : Various	-	0.142		0.248	Oct 2018	0.233	Oct 2019	-		0.233	Continuing	Continuing	-
		Subtotal	-	2.953		2.919		3.132		-		3.132	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 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 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	92.243	11.409		4.343		3.896		-		3.896	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency		Date: March 2019
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*

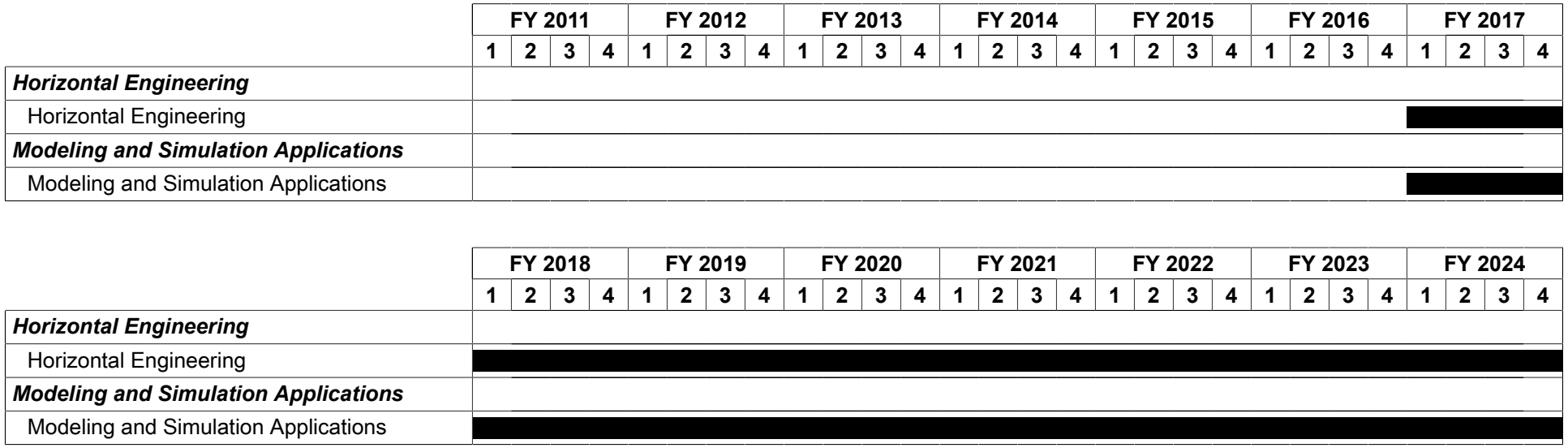

Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Information Systems Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** E65 / *Modeling and Simulation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Horizontal Engineering				
Horizontal Engineering	1	2017	4	2024
Modeling and Simulation Applications				
Modeling and Simulation Applications	1	2017	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency											Date: March 2019	
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 2018**	**FY 2019**	**FY 2020 Base**	**FY 2020 OCO**	**FY 2020 Total**	**FY 2021**	**FY 2022**	**FY 2023**	**FY 2024**	**Cost To Complete**	**Total Cost**
T62: *DoD Information Network (DODIN) Systems Engineering and Support*	53.339	8.650	11.778	11.902	-	11.902	12.155	12.299	12.544	12.678	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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.

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.

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.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency		Date: March 2019
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 2018	FY 2019	FY 2020
Title: Department of Defense Information Network (DODIN) Systems Engineering and Support	8.650	11.778	11.902
FY 2019 Plans: The CTO will expand its focus on laboratory prototyping known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler to leverage capabilities from five principal areas. These five areas are; Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DODIN, Mobile/End-User Devices). CTO will conduct technical assessments for future cloud computing technologies and innovative service delivery models, mobile devices, application development and vetting best practices, and next generation virtualized Software Defined Networks (SDN) for automating and virtualizing the DODIN. CTO will partner with commercial partners, academia, technical analysis centers, as well as organizations within the Intelligence Community, to bring state of the art capabilities to the DISA/DoD resulting in better communications and monitoring tools, enterprise services and improved end-user services and capabilities. CTO will continue to pursue and refine methods, processes and strategies to assist in the acceleration of capability into the operational environment. Develop revision to DISAruptive process, develop training support curriculum, and update user portal.			
FY 2020 Plans: 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). Identify gaps/shortfalls, pursues leading innovative solutions from industry, academia, and the Federal sector, and engages industry partners for commercial best practices. Develop technology forecasts and innovation roadmaps for existing and nascent DISA Programs in the following areas: Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DODIN/Mobile/End-User Devices). Early identification of technology need and explores, develops, and delivers recommended emerging technologies to the DISA Requirements & Analysis Office. Operationalize DISAruptive enhancements, begin training support curriculum, and begin R&D support to innovative ideas received through the DISAruptive portal.			
FY 2019 to FY 2020 Increase/Decrease Statement: The increase of +$0.124 from FY2019 to FY2020 is due to innovation identification and integration.			
Accomplishments/Planned Programs Subtotals	8.650	11.778	11.902

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency		Date: March 2019
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*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• O&M, DW/PE 0302019K: *Operation & Maintenance, Defense-Wide*	2.773	2.814	2.899	-	2.899	2.962	3.035	-	-	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.

E. Performance Metrics

Number of Technology Assessments

Performance is measured by the number of technologies assessed and the technologies transitioned or presented to DISA decision-making bodies such as the Service Portfolio Council (SPC) for acquisition decisions. The assessments identify, promote, channel and align technology research and investments. The objectives are to satisfy warfighter requirements by addressing capability gaps, to improve operational effectiveness and efficiency, and to reduce the time needed to field emerging technologies.

Measure/Goal: Number of technology assessments instantiated within the CTO Technology Environment. Number of research initiatives designed, developed, demonstrated, and transitioned or presented to DISA decision-making bodies such as the SPC for acquisition decisions.

FY 2018 Target: 12 Assessed and 8 transitioned / Actual: 12 Assessed and 8 transitioned.
FY 2019 Target: 12 Assessed and 8 transitioned.
FY 2020 Target: 12 Assessed and 8 transitioned.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency			Date: March 2019
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*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Services	FFRDC	MITRE : McLean, VA	11.410	1.500	Oct 2017	1.323	Oct 2018	1.323	Oct 2019	-		1.323	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	3.315	-		1.084	Jul 2019	2.000	Jan 2020	-		2.000	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	-		-		-		-		-	0.000	0.376	-
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	2.373	0.650	Jul 2018	-		-		-		-	0.000	3.023	-
Product Development	C/FFP	Booz Allen Hamilton : McLean, VA	0.500	0.562	Jan 2018	-		-		-		-	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 2020 Defense Information Systems Agency			Date: March 2019
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2018 Cost	FY 2018 Award Date	FY 2019 Cost	FY 2019 Award Date	FY 2020 Base Cost	FY 2020 Base Award Date	FY 2020 OCO Cost	FY 2020 OCO Award Date	FY 2020 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	MIPR	Various : Ft. Meade, MD	3.953	0.528	Oct 2017	-		-		-		-	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	1.637	1.536	Mar 2018	-		-		-		-	0.000	3.173	-
Management Services - Civilian Pay	Various	Various : Ft. Meade, MD	3.134	3.294	Oct 2017	-		-		-		-	0.000	6.428	-
Engineering Technical Services	C/FFP	PMPC-Itility LLC : Ft. Meade, MD	-	0.580	Mar 2018	0.227	Mar 2019	0.229	Mar 2020	-		0.229	Continuing	Continuing	Continuing
Information Assurance	C/CPFF	Tapestry Tech : Chambersburg, PA	-	-		0.583	Jan 2019	0.600	Jan 2020	-		0.600	Continuing	Continuing	Continuing
Sys Engineering	C/CPFF	Various : Ft. Meade, MD	-	-		3.650	Mar 2019	2.124	Mar 2020	-		2.124	Continuing	Continuing	Continuing
Management Services - Civilian Pay	C/CPFF	Various : Ft. Meade	-	-		4.911	Oct 2018	4.897	Oct 2019	-		4.897	Continuing	Continuing	Continuing
Program Management and Knowledge Management	C/FFP	TBD : TBD	-	-		-		0.229	Mar 2020	-		0.229	Continuing	Continuing	Continuing
(DODIN) Systems Engineering and Support	C/FFP	TBD : TBD	-	-		-		0.500	Mar 2020	-		0.500	Continuing	Continuing	-
		Subtotal	53.339	8.650		11.778		11.902		-		11.902	Continuing	Continuing	N/A

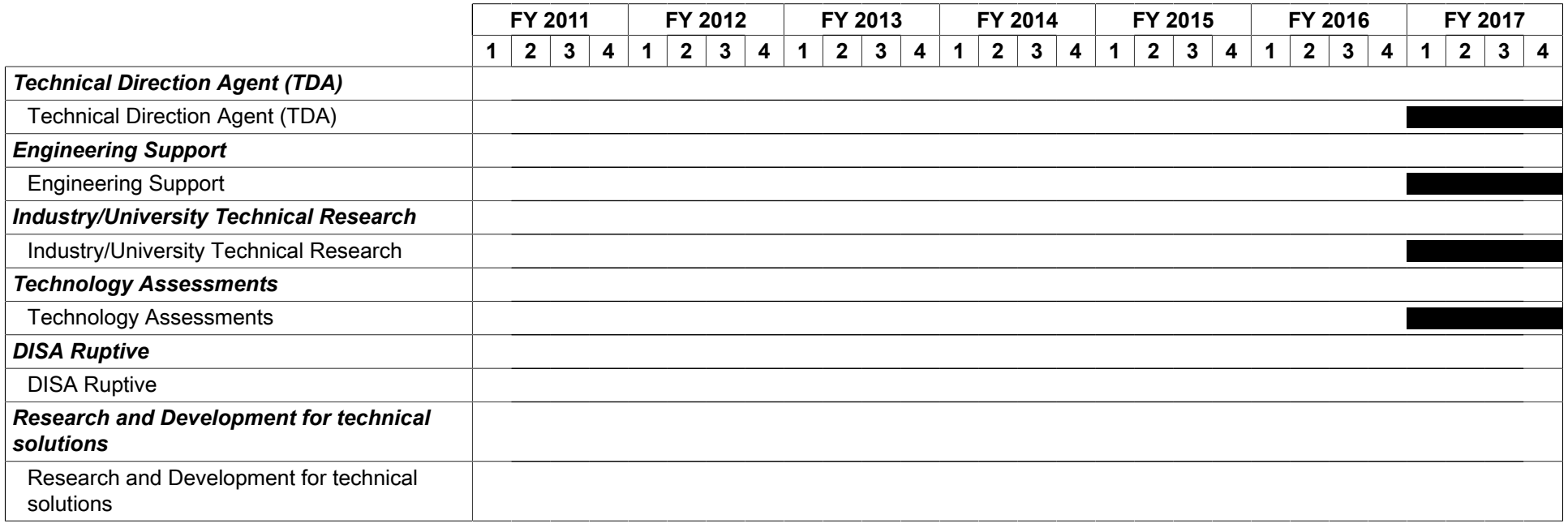
	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	53.339	8.650		11.778		11.902		-		11.902	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency			Date: March 2019
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*	

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency		Date: March 2019
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*



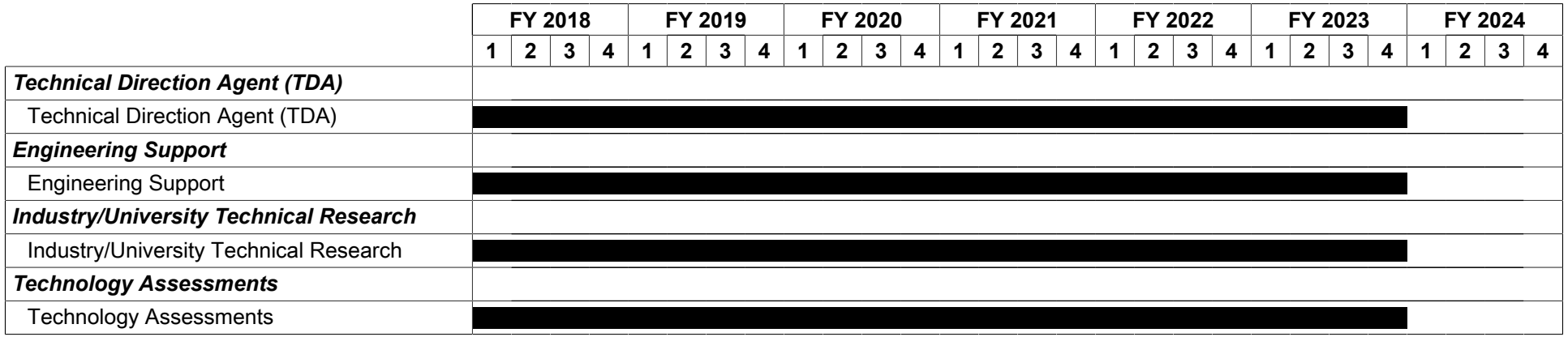


Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T62 / *DoD Information Network (DODIN) Systems Engineering and Support*

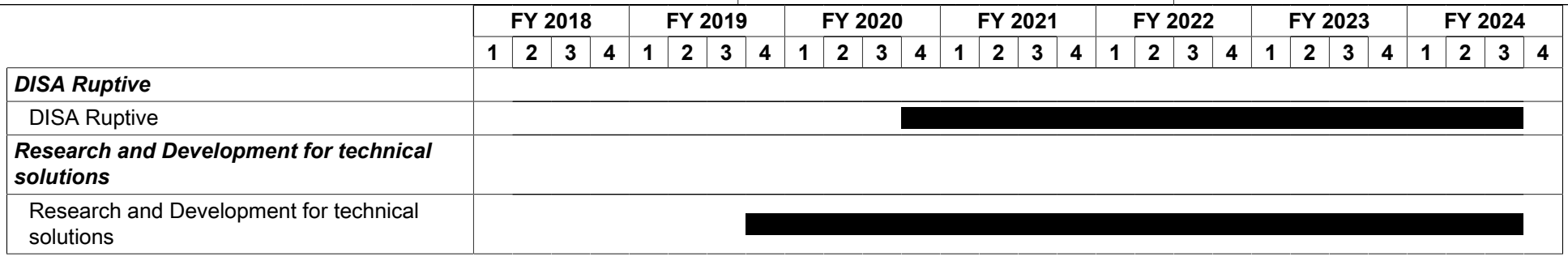


Exhibit R-4A, RDT&E Schedule Details: PB 2020 Defense Information Systems Agency		Date: March 2019
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 0302019K / *Defense Info. Infrastructure Engineering and Integration*	**Project (Number/Name)** T62 / *DoD Information Network (DODIN) Systems Engineering and Support*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Technical Direction Agent (TDA)				
Technical Direction Agent (TDA)	1	2017	4	2023
Engineering Support				
Engineering Support	1	2017	4	2023
Industry/University Technical Research				
Industry/University Technical Research	1	2017	4	2023
Technology Assessments				
Technology Assessments	1	2017	4	2023
DISA Ruptive				
DISA Ruptive	4	2020	3	2024
Research and Development for technical solutions				
Research and Development for technical solutions	4	2019	3	2024