Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force											Date: March 2024	
Appropriation/Budget Activity 3620F: *Research, Development, Test & Evaluation, Space Force I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 1203010SF *I Space Force IT, Data Analytics, Digital Solutions*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	61.723	88.610	0.000	88.610	108.027	116.921	123.882	131.038	Continuing	Continuing
645620: *Digital Engineering*	-	0.000	40.815	42.242	0.000	42.242	36.605	36.675	37.563	38.284	Continuing	Continuing
646017: *SSC Developmental IT Infrastructure*	-	0.000	20.908	46.368	0.000	46.368	71.422	80.246	86.319	92.754	Continuing	Continuing

Note

This program, BA 4, PE 1203010SF, project , USSF Integrated Operations Network (ION), is a new start.

In FY 2025, Project 645620 will begin to merge, integrate and consolidate Digital Engineering investments with the goal of providing an initial Digital Engineering Ecosystem capability for the United States Space Force (USSF). In particular prototypes and lessons learned from Space Digital Ecosystem and Integration (SpaceDEN), and Digital Engineering Interconnected Cloud-based Ecosystem (DEICE) and other USSF digital ecosystem investments will merge into one USSF Digital Engineering Ecosystem effort in FY 2025

A. Mission Description and Budget Item Justification

Digital Engineering (DE) is one of four USSF Focus areas in the Service's digital transformation, and is a key enabler. The Space Force was born as a digitally-driven organization to meet the need to respond faster to global threats and to act as a force multiplier for the lean Service. The "USSF Vision for a Digital Service," May 2021, signed by the Chief of Space Operations, states that "A key aim of [Digital Engineering] is to manage the complexity of contemporary weapon system acquisition as well as accelerate and modernize the entire capability development lifecycle—from conception to deployment to operations and sustainment." The USSF Digital Engineering Ecosystem stakeholders are from across the capability development lifecycle. Users include engineers, program managers, force designers, requirements professionals, finance professionals, contracting professionals, logisticians, acquisition leaders and decision makers, mission partners, industry connections, and all other participants in the Capability Development Lifecycle. The Department of Defense's (DoD) Defense Acquisition University definition of Digital Engineering Ecosystem is, "The interconnected infrastructure, environment, and methodology (process, methods, and tools) used to store, access, analyze, and visualize data and models to address the needs of stakeholders." The current funding profile will demonstrate a robust capability for approximately 2000 users with the goal to scale up to accommodate users across the USSF. This includes cloud-hosted and on-premises virtual machines with integrated applications tailored to users for access on users' desks through the web as well as demonstration of secure thin client and other user devices for user access. The modernized capability buildout is for all security classification domains from Controlled Unclassified Information (CUI) to Secret, Top Secret (TS), Sensitive Compartmented Information (SCI) and Special Access Program (SAP). For the SAP deployment, the program also provides initial capability for necessary secure lab space to conduct capability development using the toolsets.

This program supports the Secretary of the Air Force (SecAF) Operational Imperative (OI) #1, "Space Order of Battle" and OI #2, "Optimized Advanced Battle Management System" (ABMS). OI #1 requires the USSF to field space-based services that are resilient to attack. The Digital Engineering Ecosystem (DEE) provides the modernized capability development toolsets to accomplish design, development, sustainment and retirement decisions in support of that goal across the entire Unites States (US) military space portfolio. The DEE is essential for managing the complexity of the system-of-systems design and development orchestration necessary to build out a resilient architecture for space-based operational support systems. Additionally, the DEE improves the agility of the USSF acquisition workforce,

enabling quicker and more informed decision making and faster delivery of capabilities to warfighters. In support of OI #2, the DEE also projects to demonstrate digital engineering toolsets for the design of the USSF led portion of ABMS with the potential to scale. In addition, the program demonstrates digital transformation for use by all Space Systems Command (SSC) program offices.

Project 645620, Digital Engineering, demonstrates and builds a scalable initial increment of the DEE and demonstrates a Digital Services Ecosystem (DSE) for Space Force Capability Development. Strategic Analysis Tools will continue development of USSF Space Enterprise Architecture Modeling. The Science, Technology, and Research Studies effort focuses on an Artificial Intelligence Accelerator with the Massachusetts Institute of Technology.

Project 646017, SSC Developmental IT Infrastructure, in FY 2025 supports the SSC Chief Information Office by implementing cybersecurity integration, a Cybersecurity Operations Center, Authorizing Official and Risk Management Framework cyber assessment team, Zero Trust, and supply chain risk management capabilities. This project also includes USSF's Integrated Operations Network (ION) effort. ION will provide a secure, reliable, multi-classification data transport high speed backbone across kill webs.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver DE system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 1206392SF and 1206398SF.

This program element may include necessary support required to ensure a cyber-secure and resilient IT infrastructure.

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	0.000	61.723	62.312	0.000	62.312
Current President's Budget	0.000	61.723	88.610	0.000	88.610
Total Adjustments	0.000	0.000	26.298	0.000	26.298
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	26.298	0.000	26.298

Change Summary Explanation

FY 2025: +24.985M for Integrated Operations Network; + 1.150M for advanced space capability modeling; and other minor adjustments.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3620F / 4	R-1 Program Element (Number/Name) PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	Project (Number/Name) 645620 / *Digital Engineering*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
645620: *Digital Engineering*	-	0.000	40.815	42.242	0.000	42.242	36.605	36.675	37.563	38.284	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 645620 consolidates investments in resilient information technology infrastructure and platforms, data solutions, software toolsets across all classification levels for Digital Engineering use cases across the entire USSF into a USSF Digital Engineering Ecosystem program. Prior year's work on Space Digital Ecosystem and Integration (SpaceDEN), and Digital Engineering Interconnected Cloud-based Ecosystem (DEICE), SSC Developmental IT Infrastructure and other USSF digital ecosystem investments will merge into one IT Infrastructure and USSF Digital Engineering Ecosystem effort in FY 2025.

The Space Digital Ecosystem & Integration (SpaceDEN) program develops capabilities that support SSC's Protect and Defend assets in an increasingly contested space environment. The digital infrastructure is vital in connecting capabilities from sensor-to-shooter to close multifaceted kill chains across all warfighting domains. SpaceDEN digitizes Space Domain Awareness and Combat Power (SDACP) and Protect and Defend portfolios, enabling acquisition decisions at the speed of relevance, synergizing partnerships with industry, and closing capability gaps across both portfolios. This program will develop a Multi-Level Security Architecture utilizing a hybrid cloud by incorporating data integration across Authoritative Sources of Truth (ASOT) and Single Sources of Truth (SSOT). Building unclassified to classified network systems, digital engineering environment (DEE), and IT equipment within a physical facility, it will provide employees a place to work SAP activities and support Multi-level Security (MLS) labs. These activities include: system and data engineering, data science, prototype mock-ups, demonstrations and testing, and modeling simulations and analysis through highly complex Space Command and Control (C2) systems. The SpaceDEN efforts will be merged and harmonized to support the buildout of the SAP portion of the USSF Digital Engineering Ecosystem.

DEICE Tech Stack prototypes and develops the Digital Services Ecosystem (DSE) for Space Force Capability Development as a cloud-based, remotely accessible, multilevel security, interconnected infrastructure, providing the technical methodology used to store, access, analyze, and visualize evolving systems' data and models throughout systems' acquisition lifecycles. Digital Engineering (DE) includes the development and prototyping of critical technology and helps create models to represent all aspects of the system. DE supports all activities for the design, development, manufacture, and operation of the system throughout its lifecycle resulting in reduced sustainment costs. The data transport and cross domain layers will expand further, resulting in greater capability for synchronous C2. DEICE prototype lessons learned will be incorporated to build out the USSF Digital Engineering Ecosystem.

The USSF Digital Engineering Ecosystem includes information technology (IT), system security engineering, software, data and network modernization. The IT efforts will demonstrate IT capabilities for use in accelerating and modernizing the USSF capability development lifecycle in support of the Space Force USSF Digital Services Ecosystem. Information Technology provides customers proper tools needed to accomplish their mission. These tools enhance customer collaboration, end-user experience, exploration and integration amongst our mission partners and industry. Digital Engineering Ecosystem IT Infrastructure helps assess technical risks associated with use, by understanding the System and Enterprise-level risks posed by threats based on deployment and gathered intelligence. The software sector aims to bring Software Agile best practices as mainstream into acquisition; it also enables Platform and Infrastructure at scale based on mission thread needs. The Digital

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

Engineering Ecosystem IT infrastructure provides deliberate data exposure and "normalizes" the data to make it meaningful and useful for any business or mission use case that desires to exploit it. The network modernization improves and optimizes administrative/mission networks and end-user experiences across several enclaves.

Funding will investigate, develop, and analyze USSF-unique research via studies/grants/partnerships to promote efficiency and speed leveraging industry, academia, international and other government agencies. The effort specifically focuses on taking advantage of commercial technologies available in industry for digital transformation. This funding is required to serve Chief of Space Operations priority efforts to innovate and experiment and to build an agile force that better ensures our long-term competitive advantage in space. These efforts promote competition between various research organizations (e.g., laboratories, FFRDCs, etc.) to advance critical research for contested space operations. Funding will also advance space capability modeling to support wargaming and analysis and continue development of the USSF Space Enterprise Architecture Modeling.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Digital Engineering Integration	0.000	35.993	36.204
Description: USSF Digital Engineering Ecosystem (USSF DEE) is the aggregation of multiple Environments, ASOTs, SSOTs driving toward improved data layers throughout the USSF. This integration effort enables capability development to support creation of computer readable models to represent all aspects of the system, design activities, development, manufacture, and operation of the system throughout its lifecycle. USSF DEE will lead to greater efficiency and improved quality of all the acquisition activities. USSF DEE will incorporate components of and lessons learned from prior Digital Engineering prototyping efforts SpaceDEN and DEICE and several other Digital Engineering investments across the USSF. ***FY 2024 Plans:*** Leverage existing contract vehicles for awarding Other Transaction Authority (OTA) and select Small Business Innovation Research (SBIR) Phase III contracts enabling digital Engineering and Integration Test Infrastructure that allow for DEE assessments. Prototype, develop, test and establish the Space Force Digital Engineering as a Service (DEaas) Environments hosted on Hybrid cloud platform for cloud-computing and database storage (compute & store) via SpaceDEN. Develop and test the minimum viable product (MVP) for DEaaS by providing prototypes/demos using digital engineering tools and collaboration work spaces for the architects and systems engineers of the initial programs enabling Space System Integration activities and synergies with existing and evolving space force programs. Continue development, integration and testing of DEaaS with Integration Execution activities and MLS tests. These tests will update the Government Reference Architecture (GRA) for SpaceDEN Environments with acquisition and operational databases and add additional programs into the DEaaS Environment from across SSC. Implement Integration and Operational practices for system monitoring and security procedures. Ensure Security accreditation for MLS infrastructure.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Additionally, FY 2024 funding will allow the program to continue to implementing DE resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to: studies, technical analysis, risk reduction experiments and prototyping, integration and test of C2, resiliency measures and mission partner interfaces, space test/ combat range events, and office support etc.			
FY 2025 Plans: Leverage existing contract vehicles for awarding Other Transaction Authority (OTA) and select Small Business Innovation Research (SBIR) Phase III contracts and IT integration service contracts enabling Digital Engineering and Integration prototype infrastructure that allow for assessments and capability solutions. Continue to prototype, develop, test and establish the a USSF Digital Engineering Ecosystem hosted on Hybrid cloud platform for cloud-computing and database storage (compute & store) as well as networking required. Develop and test the minimum viable product (MVP)/program increments by providing prototypes/demos using digital engineering tools and collaboration workspaces for the architects and systems engineers from initial programs to program of record enabling Space System Integration activities and synergies with existing and evolving Space Force programs. Fund and establish new networks, accreditation, digital tools, Model Based System Engineering, model and analysis, Special Access Program Platform-as-a-Service (PaaS) in support of Cyber operations, POM support planning, Kill Chain analysis, digital source selection, enterprise integration, intelligence, and penetration testing. Continue development, integration and testing of the USSF Digital Engineering Ecosystem with Integration Execution activities and MLS/cross-domain solution (CDS) prototypes. These prototypes will update the Government Reference Architecture (GRA) for USSF DEE to begin integration between acquisition and operational databases, and add additional programs into USSF DEE from across SSC. Implement Integration and Operational practices for system monitoring and security procedures. Ensure Continuous Authority to Operate (ATO) Security accreditation for MLS infrastructure. Begin to scale USSF Digital Engineering Ecosystem minimum viable product (MVP) access for a subset of 3000 users across the Space Force. This includes increasing the capacity of user access to each of the designated environments associated with each Impact Level (IL) (i.e., CUI, Secret, TS/SCI and SAP). This scaling is pivotal to increasing enterprise-wide adoption of Digital Engineering methodologies that ultimately increase the efficiency of delivering capabilities to Space warfighters.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Develop and initiate training roadmaps and curriculum for the acquisition force and capability development partners that will increase overall enterprise digital proficiency. This training is key to decreasing the time it takes for acquisition professionals to become accustomed to standardized workflows and processes and software toolsets across different program offices and organizations within the Space Force. Onboard and employ force-multiplying tools and software to the USSF Digital Engineering Ecosystem MVP, developed both externally and within organizations across the DoD. By integrating these tools with the USSF Digital Engineering Ecosystem, programs will have the ability to continue any existing, specialized methods of acquisition agnostic to their respective programs, as well as to begin employing the use of tested and evaluated tools that are standard across Space Force acquisitions. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, and activities that may leverage commercial and international opportunities. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 increased for non-pay and non-fuel inflation.			
Title: Science, Technology, and Research Studies	0.000	4.822	6.038
Description: Funds research and studies on critical technology and international efforts to prevent strategic surprise while addressing Space Force current and emerging challenges in the space domain. S&T efforts in order to deter competitors and avoid technological strategic surprise. Incentivizes US and allies to create opportunities for natural deterrence. Advances space capability modeling. ***FY 2024 Plans:*** Partner with Massachusetts Institute of Technology (MIT) Artificial Intelligence (AI) Accelerator to fund six graduate scholars and one support contractor at MIT to advance artificial intelligence integration into Space Domain Awareness. Further, additional technical studies and research investigations will be accomplished based on findings from Space Futures workshops, Center for Naval Analysis reports, MIT Lincoln Lab research, and other sources which drive competition between government and FFRDC organizations to provide additional insights into resilient and assured space capabilities. ***FY 2025 Plans:*** Continue partnership with Massachusetts Institute of Technology (MIT) Artificial Intelligence (AI) Accelerator to fund six graduate scholars and one support contractor at MIT to advance artificial intelligence integration into Space Domain Awareness. Further, additional technical studies and research investigations will be accomplished based on findings from Space Futures workshops,			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Center for Naval Analysis reports, MIT Lincoln Lab research, and other sources which drive competition between government and FFRDC organizations to provide additional insights into resilient and assured space capabilities. Fund studies related to emerging technologies. Support interagency S&T partnerships focused on key space technology categories of overlapping interest among the partnership organizations. These efforts support continual development of space-based capabilities among the partnership organizations. This includes technology assessments as well as research coordination across multiple agencies operating in the space domain. Advance space capability modeling in the Bilateral Enterprise Analysis Model (BEAM) to support wargaming and analysis. Continue development of the USSF Space Enterprise Architecture Modeling to assess the ability of current and planned Space architectures to meet Combatant Command Joint Mission threads against current and future threats. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 increased for additional space capability modeling and non-pay and non-fuel inflation.			
Accomplishments/Planned Programs Subtotals	0.000	40.815	42.242

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible. There will be numerous projects in which the program office will leverage rapid prototyping authorities to the maximum degree possible. The acquisition strategy leverages current contracts, Small Business Innovation Research (SBIR) and Indefinite Delivery - Indefinite Quantity (IDIQ) vehicles, and Other Transaction Agreements which were competitively awarded. Gaps in capability may require a new contract in FY 2024 based on lessons learned gathered during architecture refinement, market research and prototyping efforts closing out in early 1Q FY 2024. FY 2023 and FY 2024 Digital Engineering Ecosystem efforts prototype and demonstrate capability for the purpose of refining the acquisition strategy for an enduring solution for the Digital Engineering Ecosystem. Existing contracts or any necessary award to accommodate the USSF Digital Engineering Integrated Tech Stack, are scheduled to be in place by end of FY 2024. For the DEICE Tech Stack effort, Space Force plans to employ agile software development practices and techniques, such as flexible requirements, frequent user interaction, and rapid delivery. The program will acquire tools and capabilities through an agile-based Rapid Delivery Framework that: develops, integrates, and delivers new features and capabilities through 180-day program increments. Each DEE Prototype Demo further improves the MLS/CDS infrastructure and furthers digital engineering capabilities to accelerate and modernize Space Force capability development across all portfolios, as well as maturing emerging digital technologies. To deliver the cloud-based environment, contracts with cloud hosting, networking and data services providers will be utilized to provide: the software licenses, computer hosting, and cybersecurity. In addition, Federally Funded Research and Development Centers (FFRDCs) will provide expertise to develop required DE capabilities as well as optimizing the software configurations to support needed features. Finally, SBIR Phase 3

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
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contracts may be used to implement new DE capabilities based on industry best practices including: the management of the Product Backlog, assisting with on-boarding new programs, building training for new users, providing system administrative support, and creating scripts and features allowing DE activities to be automated.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Engineering MLS Prototyping	TBD	TBD : TBD	-	-		13.929	Apr 2024	10.770	Jan 2025	-		10.770	Continuing	Continuing	-
Digital Engineering Integration and Test	TBD	TBD : TBD	-	-		10.000	Jan 2024	14.644	Jan 2025	-		14.644	Continuing	Continuing	-
Science, Technology, and Research Studies	TBD	TBD : TBD	-	-		4.800	Oct 2024	6.038	Jan 2025	-		6.038	Continuing	Continuing	-
Security Accreditation	TBD	TBD : TBD	-	-		1.000	Jan 2024	3.000	Jan 2025	-		3.000	Continuing	Continuing	-
SE&I	TBD	TBD : TBD	-	-		5.000	Oct 2023	-		-		-	Continuing	Continuing	-
SBIR/STTR	TBD	TBD : TBD	-	-		1.254	May 2024	1.429	Jan 2025	-		1.429	Continuing	Continuing	-
		Subtotal	-	-		35.983		35.881		-		35.881	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IT Support	TBD	TBD : TBD	-	-		0.332	Oct 2024	0.465	Jan 2025	-		0.465	Continuing	Continuing	-
		Subtotal	-	-		0.332		0.465		-		0.465	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	TBD	TBD : TBD	-	-		3.000	Oct 2023	4.155	Jan 2025	-		4.155	Continuing	Continuing	-
FFRDC	RO	Various : Various	-	-		1.000	Oct 2023	1.741	Oct 2024	-		1.741	Continuing	Continuing	-
Other Support	TBD	TBD : TBD	-	-		0.500	Oct 2023	0.000	Oct 2024	-		0.000	Continuing	Continuing	-
		Subtotal	-	-		4.500		5.896		-		5.896	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3620F / 4	R-1 Program Element (Number/Name) PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	Project (Number/Name) 645620 / *Digital Engineering*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		40.815		42.242		-		42.242	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

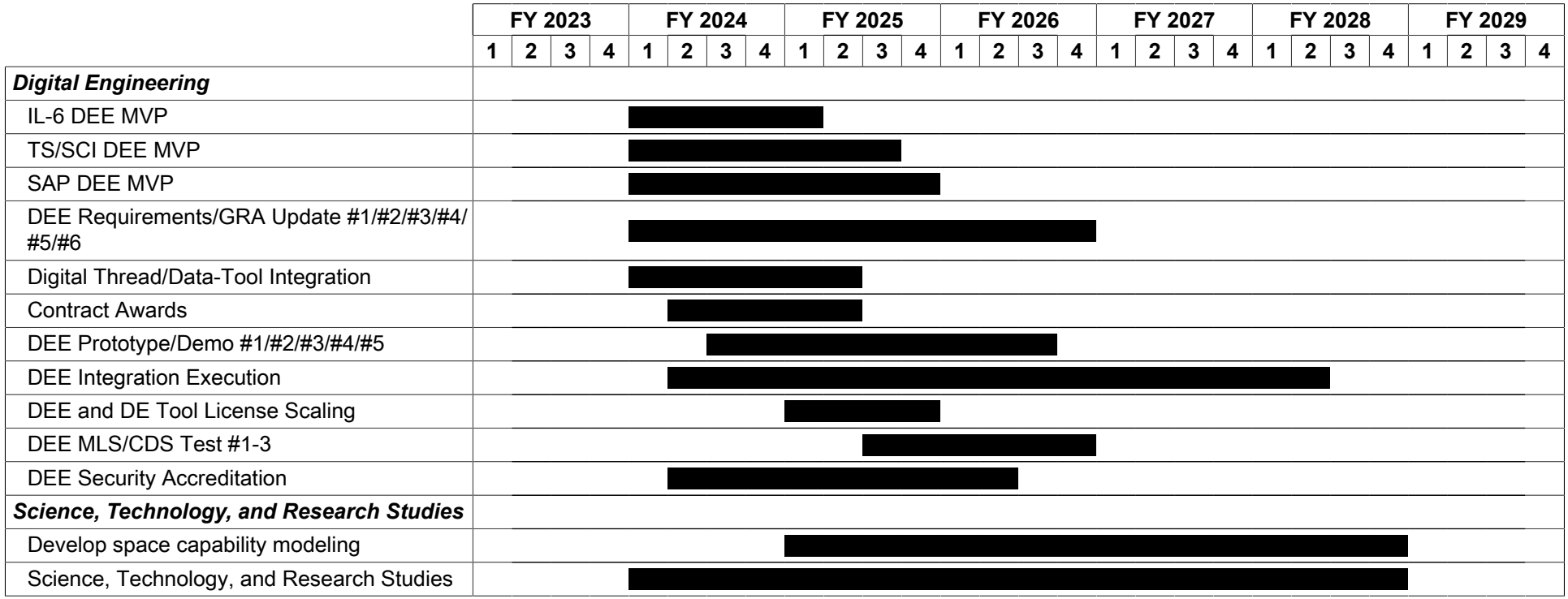

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 645620 / *Digital Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Digital Engineering				
IL-6 DEE MVP	1	2024	1	2025
TS/SCI DEE MVP	1	2024	3	2025
SAP DEE MVP	1	2024	4	2025
DEE Requirements/GRA Update #1/#2/#3/#4/#5/#6	1	2024	4	2026
Digital Thread/Data-Tool Integration	1	2024	2	2025
Contract Awards	2	2024	2	2025
DEE Prototype/Demo #1/#2/#3/#4/#5	3	2024	3	2026
DEE Integration Execution	2	2024	2	2028
DEE and DE Tool License Scaling	1	2025	4	2025
DEE MLS/CDS Test #1-3	3	2025	4	2026
DEE Security Accreditation	2	2024	2	2026
Science, Technology, and Research Studies				
Develop space capability modeling	1	2025	4	2028
Science, Technology, and Research Studies	1	2024	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force										Date: March 2024		
Appropriation/Budget Activity 3620F / 4					R-1 Program Element (Number/Name) PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*				Project (Number/Name) 646017 / *SSC Developmental IT Infrastructure*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
646017: *SSC Developmental IT Infrastructure*	-	0.000	20.908	46.368	0.000	46.368	71.422	80.246	86.319	92.754	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 4, PE 1203010SF, project , USSF Integrated Operations Network (ION), is a new start.

A. Mission Description and Budget Item Justification

SSC Developmental IT Infrastructure supports the SSC Chief Information Office by implementing cybersecurity integration, a Cybersecurity Operations Center, Authorizing Official and Risk Management Framework cyber assessment team, Zero Trust, and supply chain risk management capabilities; and supports USSF with the Integrated Operations Network (ION) effort.

SSC efforts focus on developmental cybersecurity and supports cybersecurity policies and guidance, cyber resiliency capability development, vulnerability management, and program protection. SSC Developmental Cybersecurity helps assess technical risks associated with use, by understanding the System and Enterprise-level risks posed by threats based on deployment and gathered intelligence. The effort includes implementation of DoD cybersecurity policies and guidance such as DoD's Cyber Strategy, Zero Trust (ZT) Strategy, and other directives. This includes Research, Development, Test, and Evaluation (RDT&E) efforts for enabling ZT capabilities in Space Systems and implementation of SSC ZT Guidance and Policy via pilot programs for both legacy and future ground and space systems in accordance with Executive Order 14028 Improving the Nation's Cybersecurity, which requires federal agencies to establish plans to drive adoption of ZT Architecture. Additionally, the SSC Developmental Cybersecurity will deploy and enhance SSC's Supply Chain Risk Management (SCRM) capabilities through development of SCRM Artificial Intelligence and Machine Learning (AI/ML) tools that will illuminate and monitor the Space Defense Industrial Base and provide real-time risk analysis to the Program Executive Offices. The SSC Developmental Cybersecurity will analyze emerging Commercial Satellite Communication threats and provide publications to SSC, enhance the Infrastructure Asset Pre-Approval (IA-Pre) program which conducts on-site cyber compliance assessments, improves the security posture of commercial satellite communications services that SSC procures, and explore Space Spectrum sharing with commercial partners for added resiliency and cost reduction. The SSC Developmental Cybersecurity will stand up and bolster SSC's Approving Official and Risk Management Framework (RMF) capabilities, cybersecurity integration), and other vulnerability management and program protection efforts. The SSC Developmental Cybersecurity also furnishes internal management of requirements, funding, contract actions, and PM support/training relating to the SSC Chief Information Office.

USSF's ION will reduce technology debt and provide a secure, reliable, multi-classification data transport backbone across critical kill webs designed to defend against adversary operations. This ION communications backbone will provide high bandwidth with low latency for data transport. This effort will connect with the data platform, Unified Data Library, to ensure data exposure and dissemination occur using ION's resilient connectivity from sensors to C2 centers and tactical units. ION will integrate commercially-available IT capabilities to minimize government-unique tools. This effort will be resilient and agile against cyber threats to reduce attack vectors against multiple kill webs. FY25 efforts set conditions to scale and accelerate classified cloud infrastructure expansion in anticipation of projected threat timelines.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 646017 / *SSC Developmental IT Infrastructure*

This program element may include necessary support required to ensure a cyber-secure and resilient IT infrastructure.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: USSF Integrated Operations Network (ION)	-	0.000	24.985
Description: The ION will provide a secure, reliable, multi-classification transport layer to support space missions. ION will be a dynamic cloud-based software-defined mission network that integrates Space Force capabilities providing high bandwidth and low latency for essential capabilities including support to Artificial Intelligence (AI) and the Unified Data Library (UDL). The USSF Digital Engineering Ecosystem will be integrated into ION. Space Force discovered mission network infrastructure contained significant technology debt and is initiating ION to better prepare for Great Power Competition. ***FY 2024 Plans:*** N/A ***FY 2025 Plans:*** Develop a prototype hybrid agnostic transport and data interoperability to deliver software-defined mission architecture based on Space Force kill webs addressing potential adversary operations. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase of 24.985M between FY24 and FY25 is due to a transfer from Operations and Maintenance, Space Force, SAG 13C to RDT&E, Space Force PE 1203010SF, Project 646017 / SSC Developmental IT Infrastructure because the USSF pivoted from conducting a Spaceverse study effort to developing a classified network pathfinder named ION.			
Title: SSC Developmental IT Infrastructure	0.000	20.908	21.383
Description: SSC Developmental IT Infrastructure, is a USSF initiative that aims to drive effective, resilient, innovative, and cyber-secure solutions and IT across Space Systems Command, to meet warfighter and business needs. ***FY 2024 Plans:*** SSC Developmental IT Infrastructure plans to provide customers proper tools needed to accomplish their mission; these tools bring parity between personal and work-IT experiences to increase efficiency, efficacy, and workforce morale. The network infrastructure sector plans to implement Enterprise IT as a Service (EITaaS), zero-trust integration, and the Digital Engineering Environment (DEE) framework. SSC Developmental IT Infrastructure cybersecurity will execute various efforts to help assess technical risks associated with threats based on deployment and gathered intelligence. Those efforts include, but are not limited to, implementing: cybersecurity integration, a Cybersecurity Operations Center, a cyber assessment program, and vulnerability management program. The software sector aims to bring Software Agile and DevSecOps best practices as mainstream into acquisition; it plans to enable Platform and Infrastructure at scale based on mission thread needs. The SSC Developmental IT infrastructure plans to provide			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 646017 / *SSC Developmental IT Infrastructure*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
data exposure and "normalize" the data by aligning data strategies, scaling to include various entities, and deliver Dashboards for administration and mission support. The SSC Developmental IT Infrastructure will continue to support internal management of requirements, funding, contract actions, and PM support/training relating to the SSC Chief Information Office. ***FY 2025 Plans:*** Continue prior year developmental efforts, to include development of SSC Cybersecurity policies and guidance, capability deployment, and pilot programs. After initial RDT&E efforts of ZT in FY 2024, further operational testing with various Program Executive Offices (PEO) such as Battle Management Command, Control & Communications (BMC3) and Space Domain Awareness and Combat Power (SDA & CP) will be conducted with the Space Control Network (SCN) and mesh-ONE T. Supply Chain Risk Management capabilities will be deployed to more Space Force program offices and can monitor the entire Space Force Industrial base with an estimated 20,000-30,000 suppliers. The Infrastructure Asset Pre-Approval (IA-Pre) program will continue development and commercial partnerships with the satellite communication industry for spectrum sharing will be secured and documented. Maintain support of SSC's Approving Official and Risk Management Framework (RMF) capabilities, cybersecurity integration, and other vulnerability management and program protection efforts. Furnish internal management of requirements, funding, contract actions, and PM support/training relating to the SSC Chief Information Office. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 increase due to non-pay and non-fuel inflation			
Accomplishments/Planned Programs Subtotals	0.000	20.908	46.368

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

SSC/CIO will utilize the most practical vehicle(s) and methods available within Federal Acquisition Regulation (FAR) and non-FAR contracts, agreements and solicitation methods. The CIO will utilize various pre-existing SSC SBIR and IDIQ vehicles to continue development of various enterprise solutions. For Zero Trust, a pre-existing Sequential SBIR Phase II is active and a follow-on SBIR Phase III for commercialization and operational deployment is anticipated. For SCRM, there is an ongoing SBIR Phase III contract that is supporting programs for Global Positioning System (GPS), Launch and Test Range System (LTRS), Evolved Strategic SATCOM (ESS), Overhead Persistent Infrared (OPIR), and SpaceWERX and follow-on SBIR Phase III efforts will be conducted to increase the ceiling in order to support more SSC program offices. For ZT and SCRM, competitive acquisitions and/or multi-award contracts are possible to onboard various capabilities available from industry to streamline deployment to SSC program offices. For commercial satellite communication studies, an ongoing 8(a) award has option CLINs the CIO is able to exercise until FY 2026.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force			Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 646017 / *SSC Developmental IT Infrastructure*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USSF Integrated Operations Network	C/TBD	Various : TBD	-	-		-		24.985	Jan 2025	-		24.985	Continuing	Continuing	-
SSC Developmental IT Infrastructure	TBD	Various : TBD	-	-		4.708	Jan 2024	0.470	Jan 2025	-		0.470	Continuing	Continuing	-
Technical Mission Analysis	TBD	Various : TBD	-	-		-		5.176	Jan 2025	-		5.176	Continuing	Continuing	-
SBIR/STTR	TBD	Not specified. : TBD	-	-		-		0.747	Jan 2025	-		0.747	Continuing	Continuing	-
		Subtotal	-	-		4.708		31.378		-		31.378	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	Various	Not specified. : TBD	-	-		7.667	Jan 2024	8.911	Jan 2025	-		8.911	Continuing	Continuing	-
FFRDC	Various	Not specified. : TBD	-	-		8.533	Jan 2024	5.979	Oct 2024	-		5.979	Continuing	Continuing	-
Other Support	TBD	Not specified. : TBD	-	-		-		0.100	Oct 2024	-		0.100	Continuing	Continuing	-
		Subtotal	-	-		16.200		14.990		-		14.990	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		20.908		46.368		-		46.368	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 646017 / *SSC Developmental IT Infrastructure*

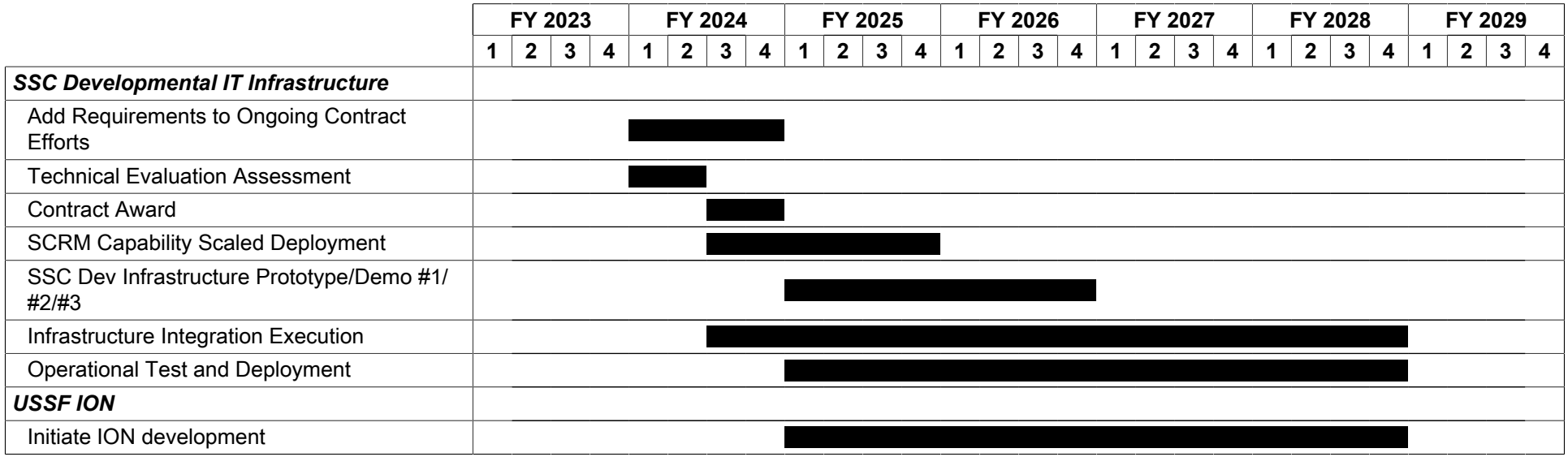

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3620F / 4	**R-1 Program Element (Number/Name)** PE 1203010SF / *Space Force IT, Data Analytics, Digital Solutions*	**Project (Number/Name)** 646017 / *SSC Developmental IT Infrastructure*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SSC Developmental IT Infrastructure				
Add Requirements to Ongoing Contract Efforts	1	2024	4	2024
Technical Evaluation Assessment	1	2024	2	2024
Contract Award	3	2024	4	2024
SCRM Capability Scaled Deployment	3	2024	4	2025
SSC Dev Infrastructure Prototype/Demo #1/#2/#3	1	2025	4	2026
Infrastructure Integration Execution	3	2024	4	2028
Operational Test and Deployment	1	2025	4	2028
USSF ION				
Initiate ION development	1	2025	4	2028