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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0303255F <i>I Command, Control, Communication, and Computers (C4) - STRATCOM</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	35.340	29.092	20.871	0.000	20.871	19.573	19.936	20.221	20.930	Continuing	Continuing
664620: <i>NC3 Enterprise Center</i>	-	35.340	29.092	20.871	0.000	20.871	19.573	19.936	20.221	20.930	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note
 FY 2022 was the last year USSTRATCOM received funding to develop or modify Modeling and Simulation and Enterprise Data Environment Development.

USSTRATCOM received a 10.0 million dollar Congressional add to establish and maintain a collaborative network capability in support of the NC3 Enterprise Center (NEC) Research Engineering and Architecture Collaboration Hub (REACH) in FY 2022 and FY 2023.

USSTRATCOM also received a 5.0 million dollar Congressional add in FY 2023 to conduct an NC3 network sensor demonstration.

A. Mission Description and Budget Item Justification

Secretary of Defense tasked USSTRATCOM Nuclear Command, Control and Communications (NC3) Enterprise Center (NEC) to oversee and monitor operations and security of the enterprise and develops tools to assist in monitoring the readiness of the NC3 architecture and capture the operational risks as adversaries develop the ability to disrupt our capabilities from multiple threat vectors. This effort will fund systems engineering and assessment activities previously accomplished by DISA in support of the NC3 Enterprise. The NEC will capture and integrate process and system data to assess operational risk, characterize multi-domain threats, and explore operational trade space associated with next generation NC3 architectures. The NEC will work with the Services to explore new technologies and develop innovative solutions in a virtual environment, and capture metrics that identify system problems and readiness issues before they impact operations. The NEC will also develop digital engineering capabilities to help support governance responsibilities of NC3.

The USSTRATCOM Mission Assurance Defense Critical Infrastructure Program (DCIP) is a risk management program that seeks to ensure the availability of networked assets critical to USSTRATCOM and other DoD missions. Critical infrastructure assets can include installations, facilities, antennas, vehicles, computing systems, and communications links. DCIP is directed by the Office of the Assistant Secretary of Defense (Homeland Defense & Americas' Security Affairs) [OASD (HD&ASA)]. DCIP manages the identification, prioritization, assessment, and assurance of critical infrastructure as a comprehensive program that includes the development of adaptive plans and procedures to mitigate risk, restore capability in the event of loss or degradation, support incident management, and protect defense critical infrastructure.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	35.340	15.559	20.869	0.000	20.869
Current President's Budget	35.340	29.092	20.871	0.000	20.871
Total Adjustments	0.000	13.533	0.002	0.000	0.002
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-1.467			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	15.000			
• 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	0.002	0.000	0.002

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 664620: *NC3 Enterprise Center*

Congressional Add: *NC3 Enterprise Center REACH*

Congressional Add: *NC3 Network Sensor Demonstration*

Congressional Add Subtotals for Project: 664620

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	10.000	10.000
	-	5.000
	10.000	15.000
	10.000	15.000

Change Summary Explanation

FY23: Federally Funded Research and Development Center (FFRDC) reduction -1.467M

Congressional Add 15.0M

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

Title: NC3 Systems Engineering and Assessments

Description: Maintain NC3 Systems Engineering and Assessment Capability

FY 2023 Plans:

- Continue oversight and configuration control of the National Leadership Command and Control (NLCC) functional baseline to include NC3
- Continue to identify NLCC capability gaps
- Develop engineering courses of action to close those gaps

	FY 2022	FY 2023	FY 2024
	12.252	13.059	19.823

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<ul style="list-style-type: none"> - Continue to recommend plans for future NLCC capabilities - Perform end-to-end testing of fielded capabilities - Perform operational assessments of current capabilities to provide quantitative measures of ongoing system performance and operational efficiency - Continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development - Demonstrate ability to capture the communication flows in the NC3 system and allow data engineers the ability to identify and work through ideas to improve the reliability and availability of NC3 - Interoperability development to support trade space analysis and mission engineering support for the NC3 Enterprise Center - Development measures of performance and effectiveness to serve as a basis for assessing gaps and issues and analyzing options and trades - Develop enterprise level standards, plans and best practices to evolve the NC3 systems - Develop NC3 Enterprise Ontology data source to support data interoperability and interface to support data exchange between the NC3 Enterprise Center and its mission partners - Continue to improve and enhance previous model development, with subsequent delivery to the cloud-based digital engineering environment. <p><i>FY 2024 Plans:</i></p> <ul style="list-style-type: none"> - Continue oversight and configuration control of the NLCC functional baseline to include NC3 - Continue to identify NLCC capability gaps - Continue to recommend plans for future NLCC capabilities - Continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development - Demonstrate ability to capture the communication flows in the NC3 system and allow data engineers the ability to identify and work through ideas to improve the reliability and availability of NC3 - Interoperability development to support trade space analysis and mission engineering support for the NC3 Enterprise Center - Development measures of performance and effectiveness to serve as a basis for assessing gaps and issues and analyzing options and trades - Develop enterprise level standards, plans and best practices to evolve the NC3 systems <p><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase from FY 2023 to FY 2024 will support the following:</p> <ul style="list-style-type: none"> - Continue to improve and enhance previous model development, with subsequent delivery to the cloud-based digital engineering environment. NC3 Digital and Mission Engineering Environment (NDMEE). - Deliver the Digital Engineering pipeline to support Enterprise Architecture, Mission engineering analysis and model capability. 			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<ul style="list-style-type: none"> - Improve the visualization and simulation capability, implementing digital engineering capabilities for rapid systems analysis capability for NC3 Enterprise Center and its mission partners. - Deliver cloud-based model, simulation and engineering capability to allow for a shared data platform to support deliverable requirements as defined by the NC3 Enterprise Center mission. - Develop NC3 Enterprise Ontology data source to support data interoperability and interface to support data exchange between the NC3 Enterprise Center and its mission partners. - Conduct mission engineering analysis studies to support the validation and engineering assessment for NC3 Enterprise performances gaps and required capabilities. - Support NC3 engineering analysis and technical standard development to support modernization capability of the NC3 Enterprise. 				
<p>Title: Modeling and Simulation and Enterprise Data Environment Development</p> <p>Description: Develop or modify modeling and simulation capability and field the NC3 Enterprise Data Environment</p> <p>FY 2023 Plans: N/A; STRATCOM has no funding in FY23 for this requirement.</p> <p>FY 2024 Plans: N/A; STRATCOM has no funding in FY24 for this requirement.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: N/A; STRATCOM has no funding in FY23 or FY24 for this requirement.</p>		12.098	0.000	0.000
<p>Title: Mission Assurance Defense Critical Infrastructure Program (DCIP)</p> <p>Description: Supports 1) systems engineering analysis for the decomposition of mission systems and assets, and supporting networks and infrastructure that execute USSTRATCOM missions, 2) research, studies, analysis, and operational assessment of mission system capabilities, methodologies, and tactics to identify critical assets and dependency relationships, and 3) evaluation of mission risk through research, studies, analysis and assessment of threats and hazards paired with exploitable vulnerabilities.</p> <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> - Continue to provide analysis, studies and research of critical infrastructure assets and dependencies supporting all USSTRATCOM assigned missions, to include focusing efforts of future critical infrastructure vulnerability assessments and researching the various sources to perform threats and hazard assessments. - Develop link-node display of systems connecting tasked missions and operational plans to mission essential tasks and critical infrastructure assets. 		0.990	1.033	1.048

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<ul style="list-style-type: none"> - Identify vulnerabilities, and participate in risk management process for remediation and mitigation. <p>FY 2024 Plans:</p> <ul style="list-style-type: none"> - Continue to provide analysis, studies and research of critical infrastructure assets and dependencies supporting all USSTRATCOM assigned missions, to include focusing efforts of future critical infrastructure vulnerability assessments and researching the various sources to perform threats and hazard assessments. - Develop link-node display of systems connecting tasked missions and operational plans to mission essential tasks and critical infrastructure assets. - Identify vulnerabilities, and participate in risk management process for remediation and mitigation. <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase is due to inflation.</p>				
Accomplishments/Planned Programs Subtotals		25.340	14.092	20.871
		FY 2022	FY 2023	
Congressional Add: NC3 Enterprise Center REACH		10.000	10.000	
<p>FY 2022 Accomplishments: - Establish and maintain a collaborative network capability in support of the NC3 Enterprise Center (NEC) Research Engineering and Architecture Collaboration Hub (REACH).</p> <ul style="list-style-type: none"> - Enable federated connectivity between REACH and mission partners. - Create a secure environment for technology evaluation, assessment, demonstration, experimentation, and development. <p>FY 2023 Plans: - Support secure hosting and collaboration environment for test, demonstration, and prototyping in support of the NC3 Enterprise Center (NEC) Research Engineering and Architecture Collaboration Hub (REACH).</p> <ul style="list-style-type: none"> - Enhance and sustain REACH collaborative network extending capability to mission partners. - Inform future architectures through technology evaluation, assessment, demonstration, experimentation, or development in a secure environment. 				
Congressional Add: NC3 Network Sensor Demonstration		-	5.000	
<p>FY 2023 Plans: - Enable a demonstration to facilitate and conduct pre-emptive network security visibility on NC3 networks</p> <ul style="list-style-type: none"> - Determine effectiveness of networks security sensors, and network traffic data analysis tools, within current network traffic flow 				

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	FY 2022	FY 2023
- Validate an enterprise network modeling tool that will map out a given NC3 network and enable more effective sensor suite placement		
- Verify NC3 network traffic data collected, and its integrity, within DoD's core for defensive cyber operations and cyber surveillance, Unified Platform		
Congressional Adds Subtotals	10.000	15.000

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF 03 0303255F: <i>STRATCOM C4</i>	4.226	4.282	4.436	-	4.436	4.795	4.893	5.064	5.171	Continuing	Continuing

Remarks

E. Acquisition Strategy

The Digital Engineering effort is led by the NC3 Enterprise Center (NEC) under USSTRATCOM and will utilize existing contracts to purchase equipment and software, in particular, requesting and funding additional capability development from on-going Service software efforts to model NC3 activities.

Projects funded through DCIP will be awarded using competitive contracts to the maximum extent possible.