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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0303004F / <i>EIT CONNECT</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	-	0.000	0.000	32.900	0.000	32.900	32.902	0.000	0.000	0.000	0.000	65.802
673100: <i>Operational System Development - Hq USAF Only</i>	-	0.000	0.000	32.900	0.000	32.900	32.902	0.000	0.000	0.000	0.000	65.802
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

**Note**

This program, BA 7, PE 0303004F, project 673100, Enterprise IT Diverse Data-Routing Network, is a new start.

**A. Mission Description and Budget Item Justification**

This Department of the Air Force (DAF) Operational Imperative effort accelerated a whole of nation approach to establish a reliable and resilient diverse data transport solution within the enterprise, in direct support of "Distributed Basing and Agile Combat Employment (ACE)" and "Readiness of the DAF to transition to a Wartime Posture Against a Peer Competitor" activities to ensure full integration of tactical communications at the edge will connect at the tyranny of the time and distance, across the Joint Force, DAF Enterprise, and allies.

The activity builds upon the deployment and connectivity of solutions being delivered under the DAF Advanced Battle Management System (ABMS) Program Element 64003F. The DAF executed Task Force Sentinel Stand (TFSS) to assess cyber COMREL at the tactical edge. TFSS proved warfighters have a critical need to take their endpoint devices to austere locations and still access needed classified data without High Assurance IP Encryptor devices. Connectivity will allow relevant mission data requirements to the edge and through space with diverse access paths to deter adversary intrusions. This will include the SD-WAN (Software-Defined Wide Area Network) routing layer to transport content across nodes through both government and commercial communication paths. Through this effort the DAF will deploy, connect, and test SD-WAN solutions in direct support of PACAF, AFFORGEN and ACE initiatives, to allow Combat Air Forces to connect, move and maneuver, and recover safely, reducing risk to mission and life.

DAF CIO's vision is to provide resilient, software-defined, transport and portable end points that create efficiencies and resiliency in transport by creating a "Black Fabric" that allows multiple providers to transport multiple classifications, rather than the historic and vulnerable approach of 1 fiber, 1 network, 1 classification. SD-WAN work initiated in Fiscal Year 2023 is a key foundational effort provides an essential Cyber and Information Technology Management Initiatives.

Specifically, in FY24, funding was allocated to initiate activities to support deployment, connection and testing of an Operational EIT SD-WAN network in an "operational prototype" configuration, to demonstrate distributed edge intelligence and C2 "on-the-move." Funding will initiate deployment of network capability that could in the future, if successful, be scaled for employment across any DAF (or DoD) installation or weapon system. FY24 and beyond funds are focused on the following outcomes:

- (FY24) Plan/direct/deploy material and non-material solutions for a test campaign to codify operational capabilities for a multi-nodal, multi-level security, SD-WAN for better understand the utility of the integrated SD-WAN architecture to satisfy enterprise-wide IT needs across multiple classification levels.

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- (FY25+) Codify requirements, through experimentation and evaluation activities, for provisioning future network solutions to proliferate and sustain the SD-WAN architecture for any DAF installation or weapon system.
- (FY25+) Define the DAF level standards for ensuring access to a proliferated SD-WAN architecture, which aligns with analogous technologies employed in the private sector today, to allow the widest possible adoption of this capability in the future.
- (FY25+) Deliver critical near-term infrastructure for OI championed ACE needs and to demonstrate a technology that supports broader Joint All Domain C2 objectives.

Valant Shield 22, Agile Reaper 23-1 and other planned exercises are underway to further define requirements for SD-WAN, ACE and AFFORGEN employment of these cutting-edge capabilities that are AOR specific and challenging today.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	32.900	0.000	32.900
Total Adjustments	0.000	0.000	32.900	0.000	32.900
• 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	32.900	0.000	32.900

**Change Summary Explanation**

FY 2022: N/A.

FY 2023: N/A

FY 2024: Reflects 32.9M increase to deploy/connect for secure, multi-level security, "black fabric" to support DAF agile combat employment requirements. Fiscal Year 2024 funding is a new start effort that will scale upon the ABMS SD-WAN architecture to build out and test against the initial multi-nodal network.

SD-WAN has been the capability of choice to enable flexible options to connect to the strongest and most reliable signal in the PACAF AOR (Cellular/ SATCOM commercial/military pathways).

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
<p><b>Title:</b> Enterprise IT Diverse Data-Routing Network</p> <p><b>Description:</b> To ensure the efficient use of DAF investment in the tactical communications at the edge to execute ACE design and validate broader DAF level requirements that provide resilient, distributed, and secure connectivity—including mobile computing and multiple communications pathways (government and commercial space, cellular, wireless, fiber)—to mitigate adversary threats to our critical Enterprise Information Technology infrastructure during both normal/peacetime operations and in wartime operations. Initial deployments will support of PACAF/INDOPACOM.</p> <p><b>FY 2023 Plans:</b> N/A</p> <p><b>FY 2024 Plans:</b> - In partnership with DAF PEO C3BM and the ABMS program, will award task order to facilitate deployment, test and validation of network capability that could in the future, if successful, be scaled for employment across any DAF (or potentially DoD) installation or weapon system.</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> As a new start activity in FY24, increase is tied to the award and deployment of initial EIT, SD-WAN based "black fabric" capability.</p>	-	0.000	32.900
<b>Accomplishments/Planned Programs Subtotals</b>	-	0.000	32.900

**D. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**E. Acquisition Strategy**  
N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Air Force</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0303004F / <i>EIT CONNECT</i>	<b>Project (Number/Name)</b> 673100 / <i>Operational System Development - Hq USAF Only</i>

FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>EIT Connect</i>	
SD-WAN	

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Air Force		<b>Date:</b> March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>EIT Connect</i>				
SD-WAN	2	2024	4	2028