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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305600F / <i>International Intelligence Technology and Architectures</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	11.564	13.515	13.635	0.000	13.635	13.690	13.755	13.910	12.580	Continuing	Continuing
675898: <i>International Intelligence Technology and Arc</i>	-	11.564	13.515	13.635	0.000	13.635	13.690	13.755	13.910	12.580	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

International Intelligence Technology and Architectures oversees, manages, and provides the United States (US) component of the multi-national Battlefield Information Collection and Exploitation Systems (BICES) with a collaborative environment and intelligence sharing enterprise required for processing and disseminating critical intelligence information between and among US, North Atlantic Treaty Organization (NATO), allied and coalition forces. The US BICES program procures and maintains a standing intelligence information sharing capability across Department of Defense (DoD), Combat Support Agencies (CSA), and multiple Combatant Commands (CCMD) for the Office of the Under Secretary of Defense, Intelligence (OUSD(I)). At the request of OUSD(I), US BICES is extended beyond NATO nations into all CCMDs to support their unique partner relationships. This architecture is known as US BICES Extended (US BICES-X). US BICES provides an "enduring" US and Coalition interoperable intelligence and information sharing multi-level secure technical architecture utilizing releasable elements of the Defense Intelligence Information Enterprise (DI2E) framework and functions to support the full spectrum of intelligence operations and dissemination throughout the DoD community. US BICES/US BICES-X has been designated the enduring intelligence and information sharing component of the Mission Partner Environment (MPE).

Research and Development funding will:

- Provide increased intelligence information sharing capabilities in support of US and coalition forces utilizing the US BICES and NATO virtual networks and provide increased database information via Distributed Common Ground System Family of Systems.
- Expand available intelligence disciplines (Geospatial Intelligence, Signal Intelligence, and potentially Human Intelligence) to support US and allied/coalition forces.
- Support increased intelligence advanced analytics tools, Joint Intelligence Operation Center-IT and DI2E developments to significantly increase the timeliness of intelligence and bring US BICES/NATO Special Operations Forces Headquarters/NATO Intelligence Fusion Center capabilities into the current technology baselines.
- Develop and enhance a federated Trusted Network Environment (TNE) that incorporates Foreign Partner information sharing networks globally to support the National Defense Strategy.
- Develop multi-level security intelligence bi-laterals and multi-laterals to meet Combatant Commander Integrated Priority Lists.
- Expand capabilities for bi-lateral and multi-lateral federated TNEs in support of CCMD requirements.

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. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	8.464	13.515	13.660	0.000	13.660
Current President's Budget	11.564	13.515	13.635	0.000	13.635
Total Adjustments	3.100	0.000	-0.025	0.000	-0.025
• 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	3.100	0.000	-0.025	0.000	-0.025

Change Summary Explanation

N/A

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>Title: International Intelligence Technology and Architectures</p> <p>Description: Continue the research and development in emerging and maturing technologies and capabilities for modernizing and transforming US BICES/US BICES-X for improved agility, scalability, access, cybersecurity, and data and information sharing tools and infrastructure.</p> <p>FY 2020 Plans: Continue development of US BICES-X capabilities including further integration of TNE into the MPE, and development and testing of coalition intelligence, surveillance, and reconnaissance (ISR) coalition capabilities. These efforts enable the modernization and transformation of the US BICES/BICES-X worldwide enterprise to enable the instantiation or interconnection of any partner network to support any operation.</p> <p>FY 2021 Plans: Continue development of US BICES-X capabilities including further integration of TNE into the MPE, and development and testing of coalition ISR coalition capabilities. These efforts will enable the modernization and transformation of the US BICES/BICES-X worldwide enterprise to enable instantiation or interconnection of any partner network to support any operation.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Funding increase based on economic assumptions for inflation.</p>	11.564	13.515	13.635
Accomplishments/Planned Programs Subtotals	11.564	13.515	13.635

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M PE 0305600F: <i>Int'l Intel Tech Architecture</i>	133.064	129.632	135.358	-	135.358	133.312	132.745	130.336	132.508	Continuing	Continuing
• OPAF 03 Line item 832050: <i>International Intelligence Technology and Architecture</i>	8.290	11.386	9.283	-	9.283	10.874	11.152	11.353	10.621	Continuing	Continuing

Remarks

The FY 2021 O&M funding was increased by \$5.670 million to support US BICES-X sustainment requirements.

The FY 2021 OPAF funding was decreased by \$2.016 million to account for the availability of prior year execution balances.

E. Acquisition Strategy

Utilize existing General Dynamics Mission Systems (GDMS) contract number FA8240-18-D-0360. The contract is structured as an Indefinite Delivery Indefinite Quantity (IDIQ) contract with a period of performance beginning 1 April 2018 through 31 March 2024. US BICES also utilizes the Air Force Research Laboratory as required for all third-party lab-based security assessments of TNE upgrade releases.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force **Date:** February 2020

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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TNE Software	Various	AFRL : Rome, NY	-	11.564	Jan 2019	13.515	Jan 2020	13.635	Jan 2021	-		13.635	Continuing	Continuing	-
Subtotal			-	11.564		13.515		13.635		-		13.635	Continuing	Continuing	N/A
Project Cost Totals			-	11.564		13.515		13.635		-		13.635	Continuing	Continuing	N/A

Remarks

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
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FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
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

Trusted Network Environment (TNE) Software Version 4.1 features Web application programming interface (API), advanced search, user notifications, user-editable GAL, 2nd phase OS upgrade

TNE 

Trusted Network Environment Software Version 4.2 features UX enhancements, Cross-Domain VDI, VoIP/Video HD/VTC enhancements, 3rd phase OS upgrade

TNE 

Trusted Network Environment Software Version 4.3 features UX enhancements, FMV, chat peer federation, support for mission applications, 1st phase single sign-on, final phase OS upgrade

TNE 

Trusted Network Environment Software Version 5.0 features cloud-based implementation and virtualized connection methods

TNE 

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Trusted Network Environment (TNE) Software Version 4.1 features Web application programming interface (API), advanced search, user notifications, user-editable GAL, 2nd phase OS upgrade</i>				
TNE	4	2019	2	2021
<i>Trusted Network Environment Software Version 4.2 features UX enhancements, Cross-Domain VDI, VoIP/Video HD/VTC enhancements, 3rd phase OS upgrade</i>				
TNE	1	2020	4	2021
<i>Trusted Network Environment Software Version 4.3 features UX enhancements, FMV, chat peer federation, support for mission applications, 1st phase single sign-on, final phase OS upgrade</i>				
TNE	3	2019	2	2022
<i>Trusted Network Environment Software Version 5.0 features cloud-based implementation and virtualized connection methods</i>				
TNE	3	2021	2	2025

Note

- GAL - Global Address List
- OS - Operating System
- VDI - Virtual Desktop Infrastructure
- VoIP - Voice of IP
- UX - User Experience
- FMV - Full Motion Video
- HD/VTC - High Definition / Video Teleconferencing