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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 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</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	-	36.157	38.201	36.582	0.000	36.582	44.028	45.000	45.919	47.580	Continuing	Continuing
656060: <i>Standards Management</i>	-	36.157	38.201	36.582	0.000	36.582	44.028	45.000	45.919	47.580	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Open Architecture Management (OAM) Office (OAMO) at the Air Force Life Cycle Management Center is responsible for developing, evolving, and managing open standards. Open standards permit Department of Defense programs to reduce acquisition and life-cycle costs as well as the risks associated with development, sustainment, technology refresh, and capability upgrades of mission systems on weapon systems. The OAMO continues to manage the Open Mission Systems (OMS) and the Universal Command and Control (C2) Interface (UCI) Standards. Additionally, the OAMO will continue executing efforts to mature various open standards and government reference architectures (GRAs) to ensure compatibility and interoperability to meet program needs. Finally, OAMO will continue to enable application of open standards in weapon system designs, and to enable open standards and GRAs to transition to OAMO management.

OAMO provides funding to multiple entities, including but not limited to the Air Force Research Laboratory (AFRL), the 76th Software Engineering Group (76 SWEG), defense contractors, Federally Funded Research and Development Centers, and University Affiliated Research Centers in support of standards management activities. AFRL is responsible for executing science and technology initiatives to further develop the OMS/UCI Standards. The 76 SWEG is responsible for key activities and deliverables for the OMS and UCI standards including: managing a collaborative tools environment, updating tools in the OMS/UCI Starter Kit, updating the Government critical abstraction layer, maintaining the Reference Implementation, integrating and testing the Mission Package, completing Change Package Development and Sponsorship, supporting the OMS and UCI management activities, providing support to adopting programs, and providing training and associated documentation. These entities will also be funded to support activities for other open standards and GRA initiatives.

The OAMO will continue development/maintenance of the Government Avionics Reference Architecture (GARA), an architectural framework that includes open architecture standards and Model Based Systems Engineering (MBSE) tools to guide and aid the development or modification of avionics/mission systems to enable Modular Open Systems Approach (MOSA).

The OAMO will execute P3I initiatives as required and include activities such as specifically targeted improvements to open standards and open architecture initiatives (e.g., Sensor Open Systems Architecture), coordination with other standardization efforts, enhancements (including cybersecurity, as required), and widening the relevancy and applicability of the standards the OAMO is involved with.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver open standards capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

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This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	37.109	38.222	42.548	0.000	42.548
Current President's Budget	36.157	38.201	36.582	0.000	36.582
Total Adjustments	-0.952	-0.021	-5.966	0.000	-5.966
• 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	-0.952	0.000			
• Other Adjustments	0.000	-0.021	-5.966	0.000	-5.966

Change Summary Explanation

Funding decreased by \$1.619M in FY24 due to other Air Force priorities.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Open Architecture Management Office	36.157	38.201	36.582
Description: Accomplish all industry activities that result in the annual release of the OMS and UCI standards along with the associated documentation, including training materials. Manage government activities to support the OMS and UCI Standards. Accomplish industry and government activities to support other open standards and open architecture initiatives and Government Avionics Reference Architecture (GARA) managed by the OAMO. Conduct activities to add capability and evolve standards and open architecture initiatives managed and supported by the OAMO to existing open standards and/or initiate new open standards to meet acquisition needs.			
FY 2023 Plans: Continue to modify and update the existing OMS and UCI Standards to increase and widen the pool of OMS/UCI applicability, account for emerging technologies, adjust for program specific needs, and conduct targeted training. In coordination with industry partners and government agencies, complete all activities (including quarterly common governance boards) to develop annual releases of the OMS/UCI Standards. Provide government expertise to support open standards and open architecture			

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>		R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>development efforts. Continue development of GARA. Execute activities to enhance the applicability of open standards and GRAs, and to enable open standards and GRAs to transition to OAMO management.</p> <p>FY 2024 Plans: Continue to modify and update the existing OMS and UCI Standards to increase and widen the pool of OMS/UCI applicability, account for emerging technologies, adjust for program specific needs, and conduct targeted training. In coordination with industry partners and government agencies, complete all activities (including quarterly common governance boards) to develop annual releases of the OMS/UCI Standards. Provide government expertise to support open standards and open architecture development efforts. Continue development of GARA. Execute activities to enhance the applicability of open standards and GRAs, and to enable open standards and GRAs to transition to OAMO management.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased by \$1.619M in FY24 due to other Air Force priorities.</p>				
Accomplishments/Planned Programs Subtotals		36.157	38.201	36.582
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
E. Acquisition Strategy				
<p>The Air Force Life Cycle Management Center's OAMO awarded a follow-on contract to continue the standards management activities conducted under a previously classified Air Force RDT&E Program Element. The contract is a cost plus fixed fee (CPFF) indefinite delivery/indefinite quantity (ID/IQ) that was awarded in December 2018. The first delivery order has a period of performance of 3 years beginning 1 January 2019. A second delivery order with a one-year period of performance was awarded in first quarter of FY2021 to cover the period 1 January 2022 through 31 December 2022. A period of performance extension will be exercised for January 2023 through 31 December 2023. A follow on contract is being worked to continue execution of OAMO requirements/activities once the existing ID/IQ contract ends.</p>				

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
3600 / 5				PE 0605056F / Open Architecture Management						656060 / Standards Management					
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Open Architecture Collaborative Working Group - BAE Systems	C/CPFF	BAE Systems : Nashua, NH	-	1.135	Dec 2021	1.250	Dec 2022	1.793	Dec 2023	-		1.793	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Boeing	C/CPFF	Boeing : St. Louis, MO	-	4.178	Dec 2021	2.966	Dec 2022	3.374	Dec 2023	-		3.374	Continuing	Continuing	-
Open Architecture Collaborative Working Group - General Atomics ASI	C/CPFF	General Atomics ASI : Poway, CA	-	1.081	Dec 2021	-		-		-		-	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Collins Aerospace	C/CPFF	Collins Aerospace : Westford, MA	-	1.075	Dec 2021	0.000	Dec 2022	0.000	Dec 2023	-		0.000	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Harris Corporation	C/CPFF	Harris Corp : Clifton, NY	-	1.254	Dec 2021	-		-		-		-	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Lockheed Martin	C/CPFF	Lockheed Martin : Fort Worth, TX	-	6.428	Dec 2021	5.935	Dec 2022	6.634	Dec 2023	-		6.634	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Northrop Grumman	C/CPFF	Northrop Grumman : Melbourne, FL	-	5.239	Dec 2021	8.781	Dec 2022	8.130	Dec 2023	-		8.130	Continuing	Continuing	-
Open Architecture Collaborative Working Group - Raytheon	C/CPFF	Raytheon : El Segundo, CA	-	1.912	Dec 2021	2.942	Dec 2022	2.360	Dec 2023	-		2.360	Continuing	Continuing	-
Open Architecture Collaborative Working Group - General Dynamics	C/CPFF	General Dynamics : Reston, VA	-	-		1.935	Dec 2022	1.312	Dec 2023	-		1.312	Continuing	Continuing	-
76th Software Maintenance Group (76 SMXG) Development	PO	76 SWEG : Tinker AFB, OK	-	4.506	Dec 2021	4.600	Dec 2022	4.514	Dec 2023	-		4.514	Continuing	Continuing	-
Air Force Research Laboratory (AFRL)	MIPR	AFRL : Various	-	2.334	Dec 2021	1.195	Dec 2022	2.228	Dec 2023	-		2.228	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>	Project (Number/Name) 656060 / <i>Standards Management</i>
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Science and Technology Initiatives															
Engineering Studies (1)	PO	MITRE: : Bedford, MA	-	-		1.107	Dec 2022	1.243	Dec 2023	-		1.243	Continuing	Continuing	-
Engineering Studies (2)	PO	MIT-LL : Lexington, MA	-	0.395	Jan 2022	0.451	Dec 2022	0.451	Dec 2023	-		0.451	Continuing	Continuing	-
SOSA Initiatives	Various	Existing IDIQ: : Various	-	1.806	Jan 2022	3.521	Dec 2022	0.972	Dec 2023	-		0.972	Continuing	Continuing	-
Government Avionics Reference Architecture (GARA)	SS/CPFF	GTRI UARC : Atlanta, GA	-	4.375	Mar 2022	1.828	Dec 2022	2.232	Dec 2023	-		2.232	Continuing	Continuing	-
Subtotal			-	35.718		36.511		35.243		-		35.243	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Administration	Various	OAM Program Office : Wright-Patterson AFB, OH	-	0.439	Jan 2022	1.690		1.339	Jan 2024	-		1.339	Continuing	Continuing	-
Subtotal			-	0.439		1.690		1.339		-		1.339	Continuing	Continuing	N/A

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		-	36.157	38.201	36.582	-	36.582	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>	Project (Number/Name) 656060 / <i>Standards Management</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>Develop and Evolve Standards</i>	
Quarterly Governance Boards	
FY 2022 Annual Release of OMS/UCI Standards	
FY 2023 Annual Release of OMS/UCI Standards	
FY 2024 Annual Release of OMS/UCI Standards	
FY 2025 Annual Release of OMS/UCI Standards	
FY 2026 Annual Release of OMS/UCI Standards	
FY 2027 Annual Release of OMS/UCI Standards	
FY 2028 Annual Release of OMS/UCI Standards	
FY 2022 Annual Integration Event	
FY 2023 Annual Integration Event	
FY 2024 Annual Integration Event	
FY 2025 Annual Integration Event	
FY 2026 Annual Integration Event	
FY 2027 Annual Integration Event	
FY 2028 Annual Integration Event	
FY 2022 GARA Quarterly Model Update	
FY 2023 GARA Quarterly Model Update	
FY 2024 GARA Quarterly Model Update	

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>	Project (Number/Name) 656060 / <i>Standards Management</i>
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	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
FY 2025 GARA Quarterly Model Update																												
FY 2026 GARA Quarterly Model Update																												
FY 2027 GARA Quarterly Model Update																												
FY 2028 GARA Quarterly Model Update																												
FY 2022 GARA Quarterly Configuration Management Plan Updates																												
FY 2023 GARA Quarterly Configuration Management Plan Updates																												
FY 2024 GARA Quarterly Configuration Management Plan Updates																												
FY 2025 GARA Quarterly Configuration Management Plan Updates																												
FY 2026 GARA Quarterly Configuration Management Plan Updates																												
FY 2027 GARA Quarterly Configuration Management Plan Updates																												
FY 2028 GARA Quarterly Configuration Management Plan Updates																												
FY 2022 GARA Quarterly Conformance Plan Updates																												
FY 2023 GARA Quarterly Conformance Plan Updates																												
FY 2024 GARA Quarterly Conformance Plan Updates																												
FY 2025 GARA Quarterly Conformance Plan Updates																												
FY 2026 GARA Quarterly Conformance Plan Updates																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>	Project (Number/Name) 656060 / <i>Standards Management</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Develop and Evolve Standards</i>				
Quarterly Governance Boards	1	2022	4	2028
FY 2022 Annual Release of OMS/UCI Standards	1	2022	1	2022
FY 2023 Annual Release of OMS/UCI Standards	1	2023	1	2023
FY 2024 Annual Release of OMS/UCI Standards	1	2024	1	2024
FY 2025 Annual Release of OMS/UCI Standards	1	2025	1	2025
FY 2026 Annual Release of OMS/UCI Standards	1	2026	1	2026
FY 2027 Annual Release of OMS/UCI Standards	1	2027	1	2027
FY 2028 Annual Release of OMS/UCI Standards	1	2028	1	2028
FY 2022 Annual Integration Event	4	2022	4	2022
FY 2023 Annual Integration Event	4	2023	4	2023
FY 2024 Annual Integration Event	4	2024	4	2024
FY 2025 Annual Integration Event	4	2025	4	2025
FY 2026 Annual Integration Event	4	2026	4	2026
FY 2027 Annual Integration Event	4	2027	4	2027
FY 2028 Annual Integration Event	4	2028	4	2028
FY 2022 GARA Quarterly Model Update	1	2022	4	2022
FY 2023 GARA Quarterly Model Update	1	2023	4	2023
FY 2024 GARA Quarterly Model Update	1	2024	4	2024
FY 2025 GARA Quarterly Model Update	1	2025	4	2025
FY 2026 GARA Quarterly Model Update	1	2026	4	2026
FY 2027 GARA Quarterly Model Update	1	2027	4	2027

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605056F / <i>Open Architecture Management</i>	Project (Number/Name) 656060 / <i>Standards Management</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
FY 2028 GARA Quarterly Model Update	1	2028	4	2028
FY 2022 GARA Quarterly Configuration Management Plan Updates	1	2022	4	2022
FY 2023 GARA Quarterly Configuration Management Plan Updates	1	2023	4	2023
FY 2024 GARA Quarterly Configuration Management Plan Updates	1	2024	4	2024
FY 2025 GARA Quarterly Configuration Management Plan Updates	1	2025	4	2025
FY 2026 GARA Quarterly Configuration Management Plan Updates	1	2026	4	2026
FY 2027 GARA Quarterly Configuration Management Plan Updates	1	2027	4	2027
FY 2028 GARA Quarterly Configuration Management Plan Updates	1	2028	4	2028
FY 2022 GARA Quarterly Conformance Plan Updates	1	2022	4	2022
FY 2023 GARA Quarterly Conformance Plan Updates	1	2023	4	2023
FY 2024 GARA Quarterly Conformance Plan Updates	1	2024	4	2024
FY 2025 GARA Quarterly Conformance Plan Updates	1	2025	4	2025
FY 2026 GARA Quarterly Conformance Plan Updates	1	2026	4	2026
FY 2027 GARA Quarterly Conformance Plan Updates	1	2027	4	2027
FY 2028 GARA Quarterly Conformance Plan Updates	1	2028	4	2028