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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

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 1203614F / <i>JSpOC Mission System</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	0.000	82.044	0.000	0.000	0.000	0.000	-	-	-	-	-	-
67A035: <i>Enterprise Space BMC2</i>	0.000	82.044	0.000	0.000	0.000	0.000	-	-	-	-	-	-

Program MDAP/MAIS Code: N82

Note

In FY 2019, Project 67A031, Joint Space Operations Mission System (JMS) Mission Applications, was completed. The \$1.999M entry in FY 2020 is the result of a database error.

A. Mission Description and Budget Item Justification

In FY2021, PE1203614F, Joint Space Operations Center (JSpOC) Mission System, Project 67A035, Enterprise Space BMC2 efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, Budget Activity 08, PE 1208248SF, Space C2 from Appropriation 3600, Budget Activity 07 due to the creation of a new Appropriation for Space Force and a new Budget Activity for Software and Digital Technology Pilot Programs.

The Air Force is developing a Space Command and Control (Space C2) and Space Domain Awareness (SDA) capability for the Joint Force Space Component Commander (JFSCC). The enterprise-wide system will provide a common government infrastructure and standards for rapid prototyping of dynamic SSA and Battle Management Command and Control (BMC2) applications to address the evolving and dynamic threat. The system will provide a collaborative environment that will enhance and modernize SDA and BMC2 capabilities; create decision-relevant views of the space environment; rapidly detect, track and characterize objects of interest; identify / exploit traditional and non-traditional sources; perform space threat analysis; and enable efficient distribution of data across the Space Surveillance Network (SSN). Funding includes technical studies, development, experimentation, integration and related support costs.

Space acquisition must respond with speed and agility to emerging adversary threats. Space & Missile Systems Center (SMC) has transformed the organization and implementation of space acquisition to an enterprise approach, maximizing innovation and resiliency, leveraging international, commercial, and mission partnerships, and managing program/project priorities according to an integrated unclassified/classified enterprise space architecture. Expanding the appropriate acquisition authorities and contract mechanisms to deliver capability sooner, SMC will strategically execute experimentation, prototyping, risk reduction, and other efforts to develop new or repurpose capabilities.

This Program Element may include necessary civilian pay expenses required to manage, execute, and deliver Space C2 weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in Program Elements 1206392F and 1206398F.

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)	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>
Previous President's Budget	89.760	0.000	0.000	0.000	0.000
Current President's Budget	82.044	0.000	0.000	0.000	0.000
Total Adjustments	-7.716	0.000	0.000	0.000	0.000
• 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	7.570	0.000			
• SBIR/STTR Transfer	-10.287	0.000			
• Other Adjustments	-4.999	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System				Project (Number/Name) 67A035 / Enterprise Space BMC2			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
67A035: Enterprise Space BMC2	0.000	82.044	0.000	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Enterprise provides a SDA & BMC2 System that allows JFSCC to meet dynamic and emerging threats. Continuously develop capabilities that include, but are not limited to, SSA, battle space awareness, dynamic planning and tasking, create an interactive modeling and simulation environment to support training and exercises, collaborative data sharing, and Course of Action (COA) development and assessment. Funding includes technical studies, development, experimentation, systems engineering, integration and related support costs.

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

	FY 2020	FY 2021	FY 2022
Title: Enterprise Space BMC2	82.044	0.000	0.000
Description: This program delivers a robust and responsive Space Domain Awareness (SDA) and Battle Management Command and Control (BMC2) capability to meet emerging threats. The program will deliver capability for decision makers trying to prevent a conflict from extending to space, or winning it if it does. Capabilities and associated infrastructure include, but are not limited to, SDA, Indications & Warning (I&W), Transmit/Receive, Space Control, Tactical Operations; and Common Data Management Layer, Platforms and Infrastructure; Cyber and Threat Warning. Other activities include dedicated Systems Engineering & Integration (SE&I), Test & Evaluation (T&E), Model Based Systems Engineering (MBSE) and prototype Validation & Verification to support these efforts.			
FY 2021 Plans: NA			
FY 2022 Plans: N/A			
Accomplishments/Planned Programs Subtotals			
	82.044	0.000	0.000

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

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• SPAF 01 SPCMOD: Space Mods	10.368	0.000	0.000	-	0.000	-	-	-	-	-	-

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / <i>JSpOC Mission System</i>	Project (Number/Name) 67A035 / <i>Enterprise Space BMC2</i>
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D. Acquisition Strategy

The Air Force is employing agile software development practices such as flexible requirements, frequent user interaction, and rapid delivery and deficiency retirement. This strategy focuses on rapidly delivering capability to warfighters, leveraging commercial, industry and government partners. Currently there are multiple competitive contractors and no prime contractor, a prime contractor is to be determined.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
ESBMC2 Government Capability Development	Various	Various : Various	0.000	0.000		-		-		-		-	-	-	-
ESBMC2 Enterprise Systems Engineering & Integration	Various	Various : Various	0.000	10.050	Dec 2019	-		-		-		-	-	-	-
ESBMC2 Tools	Various	Various : Various	0.000	0.000		-		-		-		-	-	-	-
ESBMC2 Technical Mission Analysis (WS)	MIPR	Various : Various	0.000	0.000		-		-		-		-	-	-	-
Catalyst Campus/PaaS	C/TBD	Not specified. : TBD	0.000	29.580	Jan 2020	-		-		-		-	-	-	-
Commercial Capability	C/Various	Not specified. : TBD	0.000	19.034	Dec 2019	-		-		-		-	-	-	-
Dynamic SSA Integration	C/TBD	Not specified. : TBD	0.000	11.553	Nov 2019	-		-		-		-	-	-	-
Weapon System Integration	C/TBD	Not specified. : TBD	0.000	0.210	Feb 2020	-		-		-		-	-	-	-
Subtotal			0.000	70.427		-		-		-		-	-	-	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Civilian Reimbursable Budget Authority	Various	SMC : El Segundo, CA	0.000	0.124	Jan 2020	-		-		-		-	-	-	-
Database error	C/CPAF	Not specified. : TBD	0.000	0.000		-		-		-		-	-	-	-
Subtotal			0.000	0.124		-		-		-		-	-	-	N/A

Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Test	Various	Various : Various	0.000	1.582	Nov 2019	-		-		-		-	-	-	-
Subtotal			0.000	1.582		-		-		-		-	-	-	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	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

ESBMC2	
Platform/Infrastructure	
Program Increment 4-7	
Program Increment 8-11	
Data Management	

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203614F / JSpOC Mission System	Project (Number/Name) 67A035 / Enterprise Space BMC2
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ESBMC2				
Platform/Infrastructure	1	2020	4	2020
Program Increment 4-7	1	2020	4	2020
Program Increment 8-11	4	2020	4	2020
Data Management	1	2020	4	2020