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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 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0708051F / <i>Rapid Sustainment Modernization (RSM)</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	-	5.802	19.964	0.000	0.000	0.000	-	-	-	-	-	-
648051: <i>Rapid Sustainment Modernization Technologies</i>	-	5.802	19.964	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Rapid Sustainment Modernization program provides funding to the Rapid Sustainment Office (RSO). The RSO will develop, test and deploy new technologies for implementation across the sustainment enterprise, to improve readiness, and reduce sustainment costs.

RSO will achieve this by reaching across the sustainment enterprise to include the warfighter, depot maintenance, field maintenance, supply chain and program offices to identify enterprise needs. RSO will then identify, assess, develop, validate and verify new technology projects that support these areas, all while reducing costs and increasing aircraft readiness

RSO New Sustainment technologies such as; Conditioned Based Mtx Plus (CBM+), Advanced Manufacturing (AM/Coldspray), Digital Engineering, Automation/Robotics, Augmented and Virtual Reality, Austere/Contested environments are evaluated across the technology space in support of the Department of the Air Force (DAF) sustainment enterprise

This is a new program element created based off the FY 2021 appropriation line item 56A. This requirement is not a new start as it was previously funded and executed with DAF Research, Development, Test and Evaluation (RDT&E) funding.

This effort is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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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	0.000	0.000	0.000	0.000	0.000
Current President's Budget	5.802	19.964	0.000	0.000	0.000
Total Adjustments	5.802	19.964	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	5.802	19.964			
• 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	0.000	0.000	0.000

Change Summary Explanation

FY 2022 decreased compared to FY 2021. Decrease is due to FY 2021 funding being a Congressional add.

C. Accomplishments/Planned Programs (\$ in Millions)	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Title: Rapid Sustainment Modernization	5.802	19.964	0.000
Description: Advanced Repair and Qualification			
FY 2021 Plans: Digital Engineering/Digital Twin: digital transformation of the existing Air Force fleet to increase operational readiness levels, decrease parts obsolescence and diminishing manufacturing sources required to get mission capable rates to acceptable levels.			
FY 2022 Plans: N/A			
FY 2021 to FY 2022 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	5.802	19.964	0.000

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

Remarks

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E. Acquisition Strategy

Funding in this program is used toward Rapid Sustainment Office requirements.

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

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0708051F / <i>Rapid Sustainment Modernization (RSM)</i>	Project (Number/Name) 648051 / <i>Rapid Sustainment Modernization Technologies</i>
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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			
Digital Engineering - Digital Twin	TBD	Various : Wichita, KS	-	-		19.964		-		-		-	-	-	-
Advanced Repair and Qualification Processes	C/Various	Various : Tinker AFB, OK	-	5.802		-		-		-		-	-	-	-
Subtotal			-	5.802		19.964		-		-		-	-	-	N/A

	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	5.802	19.964	-	-	-	-	-	N/A

Remarks
 FY20 - New areas of additive manufacturing and cold spray technologies, equipment and qualification processes that are maturing and providing benefit to the DAF
 FY21 - Digital Engineering/Digital Twin: digital transformation of the existing Air Force fleet to increase operational readiness levels, decrease parts obsolescence and diminishing manufacturing sources required to get mission capable rates to acceptable levels

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0708051F / <i>Rapid Sustainment Modernization (RSM)</i>	Project (Number/Name) 648051 / <i>Rapid Sustainment Modernization Technologies</i>

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

Advanced Repair and Qualification Processes	
AM/Cold Spray	████████████████████
Digital Engineering	
F-16 Digital Twin Effort	████████████████████

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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Advanced Repair and Qualification Processes</i>				
AM/Cold Spray	2	2021	4	2022
<i>Digital Engineering</i>				
F-16 Digital Twin Effort	4	2021	4	2023