Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force	Date: March 2024
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603199F / *Sustainment Science and Technology (S&T)*

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	17.907	10.478	12.558	0.000	12.558	12.965	13.233	13.712	13.999	Continuing	Continuing
635351: *Technology Sustainment*	-	17.907	10.478	12.558	0.000	12.558	12.965	13.233	13.712	13.999	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program develops and demonstrates mature Air Force Research Laboratory (AFRL) sustainment technologies such as: materials, corrosion, maintenance/repair techniques, state awareness/non-destructive inspection, health management, life prediction, composite materials and logistics for transition into fielded Department of the Air Force systems to reduce life cycle sustainment costs and increase readiness. Technologies matured and demonstrated impact affordability and availability of fielded aerospace weapon systems by reducing sustainment costs, extending service life, and maintaining mission readiness and capability. This program develops and demonstrates maintenance, life cycle management, and system/fleet decision making technologies that can be implemented to address operational sustainment issues and could influence future system sustainability decisions via risk reduction to support inclusion into new systems. Studies are conducted to analyze processes and methodologies for application of technologies to address sustainment issues across the force, identifying cross cutting applications for fielded systems, and opportunities for building in sustainability into future applications. This program also develops and demonstrates affordable advanced composites for aircraft structures of fielded and emerging systems. This includes studies, analyses, and tests for application of composites to address sustainment and affordability issues across the force.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver science & technology capabilities. The use of program funds in this PE would be in addition to the civilian pay expenses budgeted in program elements 0601102F, 0602020F, 0602102F, 0602201F, 0602202F, 0602203F, 0602204F, 0602602F, 0602605F, 0602788F, 1206601SF, and 0602298F.

This program element may include necessary expenses to support the operation and maintenance of facilities to manage, execute, and deliver science and technology capabilities.

This program is in Budget Activity 3, Advanced Technology Development because this budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment.

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B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	10.662	10.478	12.533	0.000	12.533
Current President's Budget	17.907	10.478	12.558	0.000	12.558
Total Adjustments	7.245	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	8.033	0.000			
• SBIR/STTR Transfer	-0.360	0.000			
• Other Adjustments	-0.428	0.000	0.025	0.000	0.025

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 635351: *Technology Sustainment*		
Congressional Add: *Tagless IUID*	1.940	0.000
Congressional Add: *advanced predictive analytics for supply chain risk management*	5.000	0.000
Congressional Add Subtotals for Project: 635351	6.940	0.000
Congressional Add Totals for all Projects	6.940	0.000

Change Summary Explanation

Increase in FY 2025 is due to increased emphasis in sustainment technology for future systems.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Prevention/Enhanced Maintainability Technologies	5.699	5.449	12.558
Description: Develop, demonstrate, and transition maintenance and sustainment technologies to improve component design, maintenance, replacement, and concepts for performance improvement and reduced maintenance burden for the Department of the Air Force.			
FY 2024 Plans: Continue rapid repair and materials development for aircraft battle damage repair of advanced fighter aircraft. Continue advanced canopy technology development. Continue total body nondestructive evaluation system for outer mold line inspection of advanced fighter aircraft. Continue development of materials and processes to reduce maintenance burden on aerospace systems. Continue			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
efforts to demonstrate high reliability of repair and maintenance technologies to increase service time between maintenance actions. Continue to develop, demonstrate, and transition maintenance and sustainment technologies to improve component design, maintenance, repair, replacement, and concepts for maintainer training, extending part life, and reduced maintenance burden spanning Department of the Air Force mission areas of Air, Space, and Cyber. ***FY 2025 Plans:*** - Continue rapid repair and materials development for aircraft battle damage repair of advanced fighter aircraft. - Continue advanced canopy technology development. Continue total body nondestructive evaluation system for outer mold line inspection of advanced fighter aircraft. - Continue development of materials and processes to reduce maintenance burden on aerospace systems. - Continue efforts to demonstrate high reliability of repair and maintenance technologies to increase service time between maintenance actions. - Continue to develop, demonstrate, and transition maintenance and sustainment technologies to improve component design, maintenance, repair, replacement, and concepts for maintainer training, extending part life, and reduced maintenance burden spanning Department of the Air Force mission areas of Air, Space, and Cyber. - Initiate efforts to develop system fleet management decision-making tools, maintenance/repair database technologies and techniques, and supply chain/infrastructure approaches to reduce sustainment costs. These efforts span Department of the Air Force mission areas of Air, Space, and Cyber. (This moved from the Management/Improved Reliability Technologies effort within this project.) ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 funding increased compared to FY 2024 by $7.109 million due to increased emphasis on repair and maintenance technologies that decrease service time and movement of fleet management to this effort.			
Title: Management/Improved Reliability Technologies ***Description:*** Develop, demonstrate, and transition technologies to improve existing and new components, fleet management/ decision-making tools, and supply chain/sustainment infrastructure to decrease downtime and costs, and increase reliability. ***FY 2024 Plans:*** Continue system development to provide prognostic capabilities for avionics components and analysis techniques to extend engine component service life. Continue efforts to develop system fleet management decision-making tools, maintenance/repair database technologies and techniques, and supply chain/infrastructure approaches to reduce sustainment costs. These efforts span Department of the Air Force mission areas of Air, Space, and Cyber. Continue efforts based on competitive selection processes in FY 2021. ***FY 2025 Plans:***	5.268	5.029	0.000

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Complete system development to provide prognostic capabilities for avionics components and analysis techniques to extend engine component service life. - Complete efforts to develop system fleet management decision-making tools, maintenance/repair database technologies and techniques, and supply chain/infrastructure approaches to reduce sustainment costs. These efforts span Department of the Air Force mission areas of Air, Space, and Cyber. - Complete efforts based on competitive selection processes in FY 2021. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 funding decreased compared to FY 2024 by $5.029 million due to movement of fleet management to Prevention/ Enhanced Maintainability Technologies.			
Accomplishments/Planned Programs Subtotals	10.967	10.478	12.558

	FY 2023	FY 2024
Congressional Add: Tagless IUID ***FY 2023 Accomplishments:*** Conduct Congressionally directed efforts. This was originally appropriated in Line 265, Logistics Information Technology (LOGIT) PE 0708610F but moved to this program as this work does not align with Line 265 but does with this program. ***FY 2024 Plans:*** Not applicable	1.940	0.000
Congressional Add: advanced predictive analytics for supply chain risk management ***FY 2023 Accomplishments:*** Conduct Congressionally directed efforts. This was originally appropriated to DARPA Line 2 DEFENSE RESEARCH SCIENCES, 0601101E but was transferred to this program for proper execution. ***FY 2024 Plans:*** Not applicable	5.000	0.000
Congressional Adds Subtotals	6.940	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

N/A