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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force **Date:** March 2024

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 0605024F / <i>Anti-Tamper Technology Executive Agency</i>
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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	-	49.908	49.613	65.792	0.000	65.792	66.187	68.714	71.430	73.221	Continuing	Continuing
675066: <i>Anti-Tamper Technology Executive Agent</i>	-	49.908	49.613	65.792	0.000	65.792	66.187	68.714	71.430	73.221	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): N42

A. Mission Description and Budget Item Justification

The Anti-Tamper (AT) Technology Executive Agency budget funds activities related to the DoD Executive Agent for AT (ATEA) responsibilities required by DoD Directive 5200.47E, "Anti-Tamper (AT)." These responsibilities are unique to the DoD ATEA and the Air Force Component Office of Primary Responsibility (OPR) for AT. The DoD ATEA is responsible for developing and enforcing AT policy and guidance, assessing AT technologies (hardware and software), maintaining and developing new AT technology products and assessment capabilities, maintaining and maturing AT laboratory equipment and infrastructure, establishing and maintaining a library of AT technologies, providing security guidance and support mechanisms, providing outreach and education to the DoD AT community, providing intelligence support, and evaluating AT implementations across all DoD acquisition programs, foreign military sales (FMS), and direct commercial sales (DCS). The AF OPR for AT evaluates AT on applicable AF acquisition programs, FMS, and DCS as well as manages AF AT technology development.

AT directly enables CPI resilience. AT protects critical program information (CPI), in U.S. weapon systems that are no longer under U.S. control (e.g., lost/left on the battlefield or sold to a foreign government) from hands-on, reverse engineering (RE) attacks. AT protections enable the U.S. to preserve its technological advantage and the combat capabilities of critical weapons systems while supporting the warfighters' mission requirements. Furthermore, AT adds longevity to DoD weapon systems by deterring or delaying RE attacks, and thus reducing an adversaries' ability to obtain the CPI and/or develop weapon countermeasures against the system. All DoD acquisition programs, FMS, and DCS with CPI require a validated AT Plan.

The AT program includes resources required for subject matter experts (SMEs) to evaluate AT Plans and conduct AT validation on all DoD Weapon Systems. Additionally, the AT program provides resources for SMEs to perform AT assessments of both commercial off the shelf (COTS), contractor funded government only use (CFGO) and government off the shelf (GOTS) products. As the COTS, CFGO and GOTS technologies advance, the AT program includes the resources required to mature AT hardware/software assessment capabilities. These capabilities include the acquisition of specialized equipment, maintenance and/or renovations to support the integration of this equipment, and modifications to new and/or existing laboratory facilities to meet equipment and security requirements.

The DoD ATEA coordinates technology development among the DoD Services/Agencies, National Laboratories, and Industry. These technology development efforts fund development of new AT technology, as well as enhance existing AT technology efforts to increase the technology readiness level (TRL) and facilitate transition for programs to implement. The AT technology development and enhancement efforts include: advanced AT sensor hardware, secure processing, crypto-analysis, tamper penalties, modifying and developing technology to address vulnerability and susceptibility of fielded parts, and other AT enablers.

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The Air Force AT OPR conducts AT technology and product development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems. Technology and product development priorities are given to those technologies/products that most benefit AF acquisition programs while aligning to the overall DoD ATEA technology and product development strategy. These activities are coordinated through the ATEA as a part of the ATEA technology and product development roadmap and to coordinate with Navy and Army AT technology development efforts.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23 \$2.7M was expended for civilian pay expenses in this program element and in FY24 \$3.8M is forecasted for civilian pay expenses in this program element.

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.

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	50.066	49.613	54.326	0.000	54.326
Current President's Budget	49.908	49.613	65.792	0.000	65.792
Total Adjustments	-0.158	0.000	11.466	0.000	11.466
• 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	-0.158	0.000			
• Other Adjustments	0.000	0.000	11.466	0.000	11.466

Change Summary Explanation

The FY 2025 President's Budget submittal was increased, over FY24's submission, by \$11.466M due to approved POM request for increased requirements in Evaluations, Assessments, and AT Technology Enablers.

The FY 2024 President's Budget number was reduced by \$0.158M for SIBR transfer.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
Title: DoD Anti-Tamper Technology Executive Agent (DoD ATEA)	33.840	38.236	49.190

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Description: AT technology and product development/coordination, roadmaps, MBSE, and evaluations, hardware/software vulnerability assessments, capability development, laboratory equipment and infrastructure improvements; outreach and education to the AT Community, AT implementation validation and evaluation, as well as AT policy development.</p> <p>FY 2024 Plans: - Continue to validate and evaluate AT implementations on all DoD Acquisition programs; initiate product development activities to include (but not limited to): studies, requirements generation, MBSE, technology roadmaps, integration support, and support OSD Weapon System AT requirements; conduct vulnerability assessments, develop advanced assessment capabilities, improve laboratory equipment and infrastructure, and provide intelligence support. Develop AT policy and continue to train the acquisition workforce on AT policy and technology.</p> <p>FY 2025 Plans: - Continue to validate and evaluate AT implementations on all DoD Acquisition programs; initiate product development activities to include (but not limited to): studies, requirements generation, MBSE, technology roadmaps, integration support, early contract initiation for product development, and support OSD Weapon System AT requirements; conduct vulnerability assessments, develop advanced assessment capabilities, improve laboratory equipment and infrastructure, and provide intelligence support. Develop AT policy and continue to train the acquisition workforce on AT policy and technology.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increase due to approval of additional Evaluations, Assessments and development related activities by SECAF.</p>				
<p>Title: DoD ATEA Program Management Support</p> <p>Description: Includes civilian pay, A&AS, outreach and education, travel, supplies, and AFLCMC/XA-AT support.</p> <p>FY 2024 Plans: Support program office efforts, including civilian pay, A&AS, intelligence support, outreach and education, travel, and supplies.</p> <p>FY 2025 Plans: Support program office efforts, including civilian pay, A&AS, intelligence support, outreach and education, travel, and supplies.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increase from FY24 to FY25 due to shifting of FY within year of execution to better align with OSD goals. FY23 and FY25 are consistent in level of workload required.</p>		9.949	5.084	10.209
<p>Title: Air Force Anti-Tamper Technology and Product Development</p>		6.119	6.293	6.393

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<p>Description: Conduct Anti-Tamper technology and product development to meet Air Force (AF) service needs to mature promising AT technologies to transition to AF weapon systems. Fund and manage new technology development efforts, to include studies and requirements generation, all targeted to protect AF CPI. These new AT technology requirements will be obtained from AF programs and these new AT technologies will then transition to Air Force and DoD programs.</p> <p>The AT technology and product development and enhancement efforts include (but not limited to): advanced AT sensor hardware, secure processing, crypto-analysis, tamper penalties, and other AT enablers.</p> <p>FY 2024 Plans: Conduct Anti-Tamper technology development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems.</p> <p>FY 2025 Plans: Conducts Anti-Tamper technology development to meet Air Force service needs to mature promising AT technologies to transition to Air Force weapons systems.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to increase in requirements.</p>			
Accomplishments/Planned Programs Subtotals	49.908	49.613	65.792

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

N/A

Remarks

E. Acquisition Strategy

The DoD ATEA acquisition strategy is to coordinate DoD AT technology and product developments, including associated studies and requirements generation activities across the Services which fund development and assessments of new AT technology, as well as enhance existing AT technology efforts by increasing TRL. The output of the studies and requirements generation will also poise the ATEA for ATEA-funded product and technology development. The ATEA will coordinate the Technology and Product Development Roadmap with major Prime vendors. Evaluating their technology is of major importance. The ATEA will also coordinate with the Service AT personnel to foster communication and understand what programs Services are developing for their AT implementation. Emerging research areas such as materials, cryptography and electronic circuits have the potential to bring new AT capabilities with increased processing power, reduced power draw, and smaller form factor. The goal of the research and ultimate technology and product development is to mature promising technologies to the point they can be transitioned to a program office or industry for integration and implementation in DoD weapon systems. Priorities will be given to those technologies that most benefit the DoD AT community.

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Appropriation/Budget Activity	R-1 Program Element (Number/Name)
3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>

The Air Force AT Office will fund and manage new technology and product efforts to protect Air Force and DoD CPI. These new AT technology requirements will be obtained from AF and DoD programs and these new AT technologies will then transition to Air Force and DoD programs.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force												Date: March 2024			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
3600 / 7				PE 0605024F / Anti-Tamper Technology Executive Agency					675066 / Anti-Tamper Technology Executive Agent						
Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
Air Force AT Technology and Product Development	Various	Not specified. : Dayton, OH	-	6.119	Oct 2022	6.293	Oct 2023	6.393	Oct 2024	-		6.393	Continuing	Continuing	-
Subtotal			-	6.119		6.293		6.393		-		6.393	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
DoD Anti-Tamper Technology Executive Agent (DoD ATEA)	Various	Not specified. : Dayton, OH	-	12.588	Oct 2022	12.994	Oct 2023	13.560	Oct 2024	-		13.560	Continuing	Continuing	-
DoD ATEA Technology Executive Agent	Various	Not specified. : Huntsville, AL	-	6.695	Oct 2022	9.391	Oct 2023	11.060	Oct 2024	-		11.060	Continuing	Continuing	-
DoD AT Executive Agent Technology	Various	Not specified. : Crane, IN	-	8.633	Oct 2022	7.551	Oct 2023	12.396	Oct 2024	-		12.396	Continuing	Continuing	-
DoD Anti-Tamper Executive Agent	Various	Not specified. : Albuquerque, NM	-	5.924	Oct 2022	8.300	Oct 2023	12.174	Oct 2024	-		12.174	Continuing	Continuing	-
Subtotal			-	33.840		38.236		49.190		-		49.190	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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
DoD ATEA Program Management Support	Various	Not specified. : Dayton, OH	-	9.949	Oct 2022	5.084	Oct 2023	10.209	Oct 2024	-		10.209	Continuing	Continuing	-
Subtotal			-	9.949		5.084		10.209		-		10.209	Continuing	Continuing	N/A
Project Cost Totals			-	49.908		49.613		65.792		-		65.792	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force							Date: March 2024			
Appropriation/Budget Activity 3600 / 7			R-1 Program Element (Number/Name) PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>			Project (Number/Name) 675066 / <i>Anti-Tamper Technology Executive Agent</i>				
	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks
 Additional funding breakout and award dates are classified per the Anti-Tamper Security Classification Guide. Please contact the ATEA if additional information is required.

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Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>	Project (Number/Name) 675066 / <i>Anti-Tamper Technology Executive Agent</i>

FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
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

ATEA	
DoD ATEA Field Program Office Support	
DoD ATEA Activities	
Air Force AT Tech Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force		Date: March 2024
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0605024F / <i>Anti-Tamper Technology Executive Agency</i>	Project (Number/Name) 675066 / <i>Anti-Tamper Technology Executive Agent</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ATEA				
DoD ATEA Field Program Office Support	1	2023	4	2029
DoD ATEA Activities	1	2023	4	2029
Air Force AT Tech Development	1	2023	4	2029