Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force											Date: March 2023	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 3: *Advanced Technology Development (ATD)*					R-1 Program Element (Number/Name) PE 0603203F / *Advanced Aerospace Sensors*							
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	-	50.326	37.917	48.046	0.000	48.046	49.880	44.969	45.057	46.372	Continuing	Continuing
63665A: *Advanced Aerospace Sensors Technology*	-	20.421	16.204	29.373	0.000	29.373	30.297	24.919	25.222	25.806	Continuing	Continuing
6369DF: *Target Attack and Recognition Technology*	-	29.905	21.713	18.673	0.000	18.673	19.583	20.050	19.835	20.566	Continuing	Continuing

A. Mission Description and Budget Item Justification

The program develops and demonstrates advanced technologies for electro-optical sensors, radar sensors and electronic counter-countermeasures, and components and algorithms. It also develops and demonstrates radio frequency (RF) and electro-optical (EO) sensors for detecting, locating, and targeting airborne, fixed, and time-critical mobile ground targets obscured by natural or man-made means. This program develops the means to find, fix, target, track, and engage air and ground targets anytime, anywhere, and in any weather. This program creates and applies artificial intelligence toolsets to ensure an asymmetric advantage for the Department of the Air Force. The program demonstrates artificial intelligence enabled autonomy to augment cognitive capabilities of our Airmen and Guardians so they can keep up with the faster pace and increased complexity of warfare. This program has been coordinated through the Department of Defense Science and Technology Executive Committee process to harmonize efforts and eliminate duplication.

The Department of the Air Force technologies in this program are both enabling and enduring as we invest in maturing emerging technologies that address established mission gaps, and transformational technologies that address integrated enterprise capabilities intended to reshape the future force across air, space, and cyber warfighting domains. Development of transformational operational capabilities through advanced technology solutions focuses on five strategic capabilities: Global Persistent Awareness; Resilient Information Sharing; Rapid, Effective Decision-Making; Complexity, Unpredictability, and Mass; and Speed and Reach of Disruption and Lethality.

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 element may include necessary civilian pay expenses required to manage, execute, and deliver science and 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, 0602602F, 0602605F, 0602788F, 1206601SF, and 0602298F.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	53.750	36.997	42.398	0.000	42.398
Current President's Budget	50.326	37.917	48.046	0.000	48.046
Total Adjustments	-3.424	0.920	5.648	0.000	5.648
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	5.600			
• Congressional Directed Transfers	0.000	-4.680			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-3.424	0.000			
• Other Adjustments	0.000	0.000	5.648	0.000	5.648

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: 6369DF: *Target Attack and Recognition Technology*		
Congressional Add: *Program increase: software verification and validation for autonomous sensors*	9.017	-
Congressional Add: *Modular open autonomous software testing*	-	5.600
Congressional Add Subtotals for Project: 6369DF	9.017	5.600
Congressional Add Totals for all Projects	9.017	5.600

Change Summary Explanation

In FY 2023, Congressional Directed Reductions where due to realignment into Program 0603032F, Future AF Integrated Technology Demos, Project 0603030, Air Force Vanguards, in order to more appropriately categorize the funding according to purpose.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 3	R-1 Program Element (Number/Name) PE 0603203F / *Advanced Aerospace Sensors*	Project (Number/Name) 63665A / *Advanced Aerospace Sensors Technology*	

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
63665A: *Advanced Aerospace Sensors Technology*	-	20.421	16.204	29.373	0.000	29.373	30.297	24.919	25.222	25.806	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project area develops and demonstrates aerospace sensor and processing technologies for intelligence, surveillance, reconnaissance, target, and attack radar applications in both manned and unmanned platforms, including electro-optical sensors and electronic counter-countermeasures for radars. It provides aerospace platforms with the capability to precisely detect, track, and target both airborne (conventional and low radar cross-section) and ground-based, high-value, time-critical targets in adverse clutter and jamming environments. Project activities include developing multi-function radio-frequency systems including radar and electronic warfare technology and the position and timing information to enable distributed sensing. Desired warfighting capabilities include the ability to detect concealed targets in difficult background conditions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Passive/Multi-Mode Sensing	7.171	10.123	0.000
Description: Develop advanced techniques and prototype passive radio frequency sensors to intercept, collect, locate and track enemy radio frequency sensor systems for intelligence, surveillance and reconnaissance of air and ground targets.			
FY 2023 Plans: Complete development of core illumination selection manager algorithms that operate in complex signal environments. Continue mission level modeling to evaluate system effectiveness for relevant operational scenarios. Complete implementation of electronic support, passive radar and ISM subsystems in advanced wideband digital active electronically scanned arrays. Perform a ground-based integrated demonstration incorporating a state-of-the-art digital active electronically scanned arrays. Complete implementation of illumination selection manager into sensor resource manager, demonstrating that illumination selection manager subsystem interfaces are compliant with open architectures. Continue integration of illumination selection manager and/or passive multi-mode radar on existing airborne platforms. Continue planning for follow-on airborne demonstration.			
FY 2024 Plans: In FY 2024 technical work from this effort has been realigned to Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Multi-Spectrum Sensing Demonstration effort.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 3	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*	**Project (Number/Name)** 63665A / *Advanced Aerospace Sensors Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
FY 2024 decreased compared to FY 2023 by $10.123 million. Decrease is a result of realignment of funding to Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Multi-Spectrum Sensing Demonstration effort.			
Title: Triple Raven Advanced Technology Demonstration ***Description:*** Advance, demonstrate, and transition innovative imaging and non-imaging optical sensing technologies for surveillance and reconnaissance of airborne and ground-based objects of interest in an anti-access/area denial environment. This effort includes the development of systems, subsystems, and components necessary to yield new capabilities. ***FY 2023 Plans:*** Complete development of turbulence mitigation algorithms. Complete assembly of the entire passive and active electro-optical sensor system. Complete long range mountain-to-ground demonstration of the system at a Government test range. Demonstrate performance of system during airborne data collections and ability of the system to meet program office data collection needs. ***FY 2024 Plans:*** In FY 2024 technical work from this effort has been realigned to Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Multi-Spectrum Sensing Demonstration effort. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 decreased compared to FY 2023 by $6.081 million. Decrease is a result of realignment of funding to Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Multi-Spectrum Sensing Demonstration effort.	8.179	6.081	0.000
Title: Multi-Spectrum Sensing Demonstration ***Description:*** Develop and demonstrate new techniques for finding and identifying critical mobile targets (both land and maritime) in a highly contested environment. Bring together electro-optical/infrared and radio frequency technologies suitable for the contested environment (both airborne and space-based), in conjunction with advanced processing and algorithms to provide for decision-making at the edge. Multiple sensing modalities may be deployed on the same platform or on separate platforms to improve survivability and flexibility. A focus is on providing actionable information to a user making a decision for future actions, such as strike. The program will conduct a robust demonstration showing how the techniques enable combat operations, emphasizing resilience and tactically-relevant persistence. ***FY 2023 Plans:***	-	0.000	14.373

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 3	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*	**Project (Number/Name)** 63665A / *Advanced Aerospace Sensors Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
In FY 2023 technical work in this effort was described in Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Passive/Multi-Mode Sensing and Triple Raven Advanced Technology Demonstration efforts. ***FY 2024 Plans:*** Initiate investigation of employment concepts for penetrating intelligence, surveillance and reconnaissance, and strike to bound platforms along with their costs and available payloads. Initiate definition of options for electro-optical/infrared sensors drawing on prior work on low cost, size, weight, and power sensors and algorithms. Initiate work on an attritable laser radar sensor based on prior multi-mode laser radar work. Initiate definition of options for radio frequency sensors and techniques drawing on prior work on low-cost multi-function radio frequency sensors and distributed radio frequency techniques. Initiate planning for experiments to refine distributed radio frequency techniques. Initiate investigation into paths to bring legacy sensors into compliance with Department of Defense and Department of the Air Force open interface standards. Initiate stand up a hardware/ software integration lab to verify open standard compliance. Continue to leverage prior work on sensor fusion to initiate a focused effort on fusion in support of command and control to engage surface (ground and maritime) targets. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 increased compared to FY 2023 by $14.373 million. Increase is a result of realignment of funding from Program Advanced Aerospace Sensors, 0603203F; Project Advanced Aerospace Sensors Technology, 63665A; Passive/Multi-Mode Sensing and Triple Raven Advanced Technology Demonstration efforts.			
Title: Surface Targets Sense-Making ***Description:*** Provides real-time multi-domain battlespace awareness in highly contested environments. Develops and demonstrates autonomous cross-domain, cross-platform integrated software and hardware capabilities that enables Intelligence, Surveillance, and Reconnaissance, against high value maritime targets, in unmanned airborne systems at the tactical edge in communications degraded and denied environments. Fusion of information from multiple sources with on-board and local sensors to provide higher fidelity battlespace awareness information to the joint force as part of the Sensing Grid feed to the Joint All Domain Command and Control capability. Leverages Open Mission Systems and Sensor Open Systems Architectures to maximize platform compatibility. ***FY 2023 Plans:*** Not Applicable ***FY 2024 Plans:*** Initiate assessment and selection of surface sensing and sense-making capabilities to provide multi-modal surface target classification. Initiate assessment and selection of sensing autonomy capabilities that will enable multi-modal and distributed sensor resource management that will optimize the tracking and identification of high value surface targets. Initiate the expansion	0.000	0.000	15.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 3	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*	**Project (Number/Name)** 63665A / *Advanced Aerospace Sensors Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
of existing Modeling, Simulation, and Analysis products to represent the maritime scenario of interest and enable the necessary assessment of system design trades and associated Model Based System Engineering activities. Initiate algorithm development of mission autonomy solutions that would enable the orchestration of unmanned airborne systems for ISR support to maintain custody of high value maritime targets. Initiate the algorithm development of advanced analytics to forecast the behavior of priority surface targets. Initiate software and hardware integration of contributing algorithms into the Systems Integration Laboratory/Hardware Integration Laboratory. Initiate investigation into the optimization of existing interfaces with off-board systems connected to Joint All Domain Command and Control enterprise to enable the sharing of relevant Multi-Intelligence/Multi-Domain data sources. Initiate advanced hardware purchases for multi-platform Live, Virtual, and Constructive testing and operational experimentation. Initiate transition analysis, planning and documentation of the overall system to a transition partner. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 increased compared to FY 2023 by $15 million. Increase is a result of changes of Air Force priorities in response to the Operational Imperatives effort.			
Title: Transformational Technology Development ***Description:*** Continually funded effort. This funding allocation will initiate new and continue existing Transformational Technology Development efforts. The Transformational Technology Development program will select new projects, in alignment with mission focused areas which include, but are not limited to: Intelligent Planning and Wargaming, Battlespace Awareness, Integrated Base Defense, and Hypersonic Multi-Mission Aircraft. Investments focus on technology development efforts including, but are not limited to technologies to enhance survivability, operability and performance of personnel, sensors, and structures in a threat environment through electro-optical and radio frequency sensing capabilities and algorithms. This investment is overseen by senior representatives from Air and Space Forces who participate in the submission, initial review, and down-selection of Transformational Technology Development proposed efforts. Final selections will be reviewed by the Air Force Deputy Assistant Secretary for Science, Technology, and Engineering before a final recommendation for Congressional approval is made. ***FY 2023 Plans:*** In FY 2023 this effort was realigned under Program 0603032F Future AF Integrated Technology Demos, Project 630320, Air Force Vanguards, effort Vanguard Prospect - Resolute Sentry. ***FY 2024 Plans:*** Not Applicable ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Not Applicable	5.071	0.000	0.000
Accomplishments/Planned Programs Subtotals	20.421	16.204	29.373

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 3	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*	**Project (Number/Name)** 63665A / *Advanced Aerospace Sensors Technology*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 3	R-1 Program Element (Number/Name) PE 0603203F / *Advanced Aerospace Sensors*	Project (Number/Name) 6369DF / *Target Attack and Recognition Technology*	

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
6369DF: *Target Attack and Recognition Technology*	-	29.905	21.713	18.673	0.000	18.673	19.583	20.050	19.835	20.566	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project area develops and demonstrates advanced technologies for closed-loop, multi-domain, multi-intelligence sources, multi-platform, multi-sensor automation and autonomy, providing capabilities in battle management, fire control, battlespace awareness and visualization, predictive analytics, target recognition, sensor and information fusion, and sensor / platform asset tasking. This project also conducts advanced investigations to determine solution credibility, in terms of underlying technology and in terms of consistency with future Air Force missions within highly contested environments. This project includes robust techniques to support intelligence, surveillance, and reconnaissance and targeting missions within adverse weather conditions and against adversaries employing deceptive techniques. This project includes development of software-intensive solutions suitable for cloud-based integration and for development/operations-like operational environments. This project develops technology for effective management of online and offline information sources incorporating both constrained and cooperative sensing. This project has been realigned to better reflect technical areas being emphasized such as autonomy, multi-domain and multi-sensor information processing, leverage of machine learning developments and enterprise-level modeling, simulation and analysis.

This project includes the initiation and development of programs addressing DAF capability gaps and provides technologies for transformational future force capabilities. Transformational efforts will be identified through a competitive process and be responsive to DAF design priorities. Selected efforts will be designated as transformational, indicating enterprise-level priority.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Multidomain Analytic Development - Evolution	13.871	14.228	0.000
Description: Develop enabling capabilities and technical know-how required for Department of the Air Force multi-domain command and control within highly contested environments through closed-loop central and decentralized sensing for battle management, automated onboard systems that use complex reasoning for situational awareness (SA) leading "intelligent" response, executive reasoning for selectable re-planners that provide task allocation. Use of shared models with both onboard reasoners and mission simulation and evaluation. Built with government-owned scalable closed-loop algorithms.			
FY 2023 Plans: Continue the integration and demonstration of onboard and off-board intelligence, surveillance and reconnaissance algorithms to build a dominating intelligence, surveillance and reconnaissance capability against our adversaries. Continue the model, simulate and test new algorithm advancements for detection, identification, tracking, fusion, battle space awareness, predictive and prescriptive analytics, reasoning over an adversaries actions, collection, and execution of sensing and platform resources.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 3	**R-1 Program Element (Number/Name)** PE 0603203F / *Advanced Aerospace Sensors*	**Project (Number/Name)** 6369DF / *Target Attack and Recognition Technology*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Continue integration of new component capabilities aimed at augmenting existing Department of the Air Force capability by developing processes used to generate adversary activity models and using those models to automatically generate indications and warnings alerts. Continue to integrate all components in an open-architecture testbed running on a cloud-based environment. ***FY 2024 Plans:*** FY 2024 funding the technical work from this effort has been realigned to Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Integrated Sensing Demonstration and Autonomous Capability for Air Defense efforts. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 decreased compared to FY 2023 by $14.228 million. Decrease is a result of realignment of funding to Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Integrated Sensing Demonstration and Autonomous Capability for Air Defense efforts.			
Title: Resilient & Agile Mission Systems Architecture	3.388	1.885	0.000
Description: This project performs advanced development and demonstration of methods, technologies, and tools to enable resilience and protect mission systems against threats. This involves open and adaptable architectures for rapid integration and agile systems, cyber protections and resilience technologies to protect against threats. It integrates research efforts in electronic and cyber warfare to demonstrate novel operational capabilities through laboratory, field, and flight tests and experimentation. The goal is to reduce risk for rapid transition of novel operational capabilities into Air Force mission systems. ***FY 2023 Plans:*** Continue investigations to evolve and mature open architecture standards. Continue development of advanced networking, processing, advanced computing paradigms, and cybersecurity technologies for next-generation avionics mission system capabilities. Apply agile software technologies and digital engineering techniques for rapid and affordable development, integration, and prototype capability demonstrations. Initiate development of Reference Architecture Implementation for resilient mission systems. ***FY 2024 Plans:*** FY 2024 funding and the technical work from this effort has been realigned to Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Integrated Sensing Demonstration and Autonomous Capability for Air Defense efforts. ***FY 2023 to FY 2024 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
FY 2024 decreased compared to FY 2023 by $1.885 million. Decrease is a result of realignment of funding to Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Integrated Sensing Demonstration and Autonomous Capability for Air Defense efforts.			
Title: Integrated Sensing Demonstration ***Description:*** Integrate emerging technologies to demonstrate enhanced forward air-layer air base defense capabilities. Goal is to improve surveillance, shorten reaction time, and to apply a range of effects at precise points to provide early warning and enable defensive measures. ***FY 2023 Plans:*** Not applicable ***FY 2024 Plans:*** Initiate development and integration of demonstrated Air Force Research Laboratory technologies, emerging commercial capabilities and program of record systems into a forward air-layer air base defense mission-focused capability. Employ mission level modeling and model-based systems engineering to provide quantifiable data to drive towards solution sets that provide leading capabilities. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 increased compared to FY 2023 by $12.249 million. Increase is a result of realignment of funding from Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Multidomain Analytic Development - Evolution and Resilient & Agile Mission Systems Architecture efforts.	0.000	0.000	12.249
Title: Autonomous Capability for Air Defense ***Description:*** Design, develop and demonstrate an artificial intelligence tactical autopilot engaging in multi-ship/multi-role beyond visual range and intelligence, surveillance and reconnaissance combat operations with proficiency at or greater than Weapons School graduates. Design, develop and demonstrate an artificial intelligence-driven multi-platform/multi-domain sense-making, predictive analytics, and orchestration at the tactical edge to track/identify air and ground targets; Autonomous Air Combat Operations. ***FY 2023 Plans:*** Not applicable ***FY 2024 Plans:*** Initiate integration and demonstration of edge sensing assets cued via centralized intelligence data on air threats. Initiate evaluation of on board fusion and predictive analytics to inform orchestration of attritable platforms into areas of interest. Initiate	0.000	0.000	6.424

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
testing and evaluation of multi-platform resource managers to position assets for optimal sensing geometries. Initiate development of advanced autonomy algorithms using modern machine learning tools that control the aircraft, sensors, and weapons onboard manned and/or unmanned aircraft and perform operationally relevant combat tactics. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2024 increased compared to FY 2023 by $6.424 million. Increase is a result of realignment of funding from Program Advanced Aerospace Sensors, 0603203F; Project Target Attack and Recognition Technology, 6369DF; Multidomain Analytic Development - Evolution and Resilient & Agile Mission Systems Architecture efforts.			
Title: Transformational Technology Development ***Description:*** Continually funded effort. This funding allocation will initiate new and continue existing Transformational Technology Development efforts. The Transformational Technology Development program will select new projects, in alignment with mission focused areas which include, but are not limited to: Intelligent Planning and Wargaming, Battlespace Awareness, Integrated Base Defense, and Hypersonic Multi-Mission Aircraft. Investments focus on technology development efforts including, but are not limited to technologies to enhance survivability, operability and performance of personnel, sensors, and structures in a threat environment through multi-sensor automation and autonomy, battlespace awareness and visualization, predictive analytics, target recognition, sensor and information fusion, and sensor/platform asset tasking. This investment is overseen by senior representatives from Air and Space Forces who participate in the submission, initial review, and down-selection of Transformational Technology Development proposed efforts. Final selections will be reviewed by the Air Force Deputy Assistant Secretary for Science, Technology, and Engineering before a final recommendation for Congressional approval is made. ***FY 2023 Plans:*** In FY 2023 this effort will be realigned under Program 0603032F Future AF Integrated Technology Demos, Project 630320, Air Force Vanguards, effort Vanguard Prospect - Resolute Sentry. ***FY 2024 Plans:*** Not Applicable ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Not Applicable	3.629	0.000	0.000
Accomplishments/Planned Programs Subtotals	20.888	16.113	18.673

	FY 2022	FY 2023
Congressional Add: Program increase: software verification and validation for autonomous sensors	9.017	-

Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
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	FY 2022	FY 2023
FY 2022 Accomplishments: Conduct Congressional directed efforts		
Congressional Add: Modular open autonomous software testing	-	5.600
FY 2023 Plans: Conduct Congressional directed efforts		
Congressional Adds Subtotals	9.017	5.600

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable