Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Missile Defense Agency	Date: April 2022
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605502C / *Small Business Innovation Research - MDA*

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	114.633	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	114.633
MD45: *Small Business Innovation Research*	-	114.633	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	114.633

Program MDAP/MAIS Code: 362

Note

Funds are transferred into this Program Element (PE) in the execution year.

A. Mission Description and Budget Item Justification

Small Business Innovation Research (SBIR) explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technology that can be commercialized. SBIR and Small Business Technology Transfer (STTR) programs will develop new dual-use technology for future Missile Defense Agency (MDA) Missile Defense Systems (MDS) needs. Dual-use means that the technology will be judged on the potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new MDS technology, and as a route to national economic growth through new commercial products. MDA will conduct the competition, award, and manage the contracts.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	114.633	0.000	0.000	-	0.000
Total Adjustments	114.633	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	0.000	0.000			
• SBIR/STTR Transfer	114.633	0.000			
• Missile Defeat and Defense Enhancement	0.000	0.000	0.000	-	0.000
• Other Adjustment	0.000	0.000	0.000	-	0.000

Change Summary Explanation

FY 2021 funds were transferred to SBIR/STTR from other PEs in accordance with the SBIR/STTR Reauthorization Act of 2011.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency			Date: April 2022
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502C / *Small Business Innovation Research - MDA*	Project (Number/Name) MD45 / *Small Business Innovation Research*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
MD45: *Small Business Innovation Research*	-	114.633	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	114.633
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

N/A

A. Mission Description and Budget Item Justification

Small Business Innovation Research (SBIR) explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technology that can be commercialized. SBIR and Small Business Technology Transfer (STTR) programs will develop new dual-use technology for future Missile Defense Agency (MDA) Missile Defense Systems (MDS) needs. Dual-use means that the technology will be judged on the potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new MDS technology, and as a route to national economic growth through new commercial products. MDA will conduct the competition, award, and manage the contracts.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
Title: Small Business Innovation Research - MDA	114.633	0.000	0.000
Articles:	-	-	-
Description: MDA currently supports the Office of the Secretary of Defense SBIR/STTR Office priorities as follows: - Artificial Intelligence: Develop innovative recommendation algorithms applicable to digital data engineering artifacts and tools to be used by systems engineers for the MDS - Cybersecurity: Cyber Deception for Network Defense; Cyber Defense Ranking and Prioritization of Attack-related Events; Cyber Physical Security for Tactical Systems; Network Isolation of Industrial Control Systems - Directed Energy: Design and conduct experiments to measure and assess the electron energy distribution of high energy lasers for all scenarios including hypersonic lethality - Fully Networked Command, Control, and Communications: Creation of a Modeling and Simulation development and execution environment which significantly decreases the time to execute statistically significant batches of stochastic simulation runs for the purpose of estimating scenario output/outcome distributions while improving our knowledge of the outcome distributions - Hypersonics: Develop improved tools to model hypersonic jet interaction. Demonstrate innovative infrared and radio frequency window materials and integrated antenna technology for Government hypersonic flight systems, and develop hypersonic thermal protection system materials			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Missile Defense Agency		Date: April 2022
Appropriation/Budget Activity 0400 / 6	**R-1 Program Element (Number/Name)** PE 0605502C / *Small Business Innovation Research - MDA*	**Project (Number/Name)** MD45 / *Small Business Innovation Research*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023
- Microelectronics: Develop and deliver next generation microelectronics technologies to enhance lethality, ensure critical infrastructure, and achieve economic competitiveness - Quantum Science: Seeks to demonstrate the use of quantum computing-based modeling and simulation to design and develop lightweight structural materials - Space: Seeks innovative technologies to apply and defeat incoming ballistic missiles to provide the capability and capacity to outpace the threat. Demonstrate additive manufacturing of metallic materials for Government hypersonic flight systems ***FY 2022 Plans:*** - See Above ***FY 2023 Plans:*** Funds are transferred into this PE in the execution year. MDA plans to execute approximately $115 million in FY 2023 to support the above mentioned activities. Final amount to be determined by enactment. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** N/A			
Accomplishments/Planned Programs Subtotals	114.633	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A