Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Defense Threat Reduction Agency	Date: March 2023
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*

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	109.737	16.870	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing
RA: *Information Sciences and Applications*	109.737	16.870	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing

Note

Funding for the SBIR Program is consolidated in this program element during the year of execution. SBIR/STTR program funding was executed in Budget Activity 6 and, therefore, does not require an R-3 or an R-4.

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) programs provide the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	16.870	0.000	0.000	-	0.000
Total Adjustments	16.870	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	16.870	-			

Change Summary Explanation

Funding for the SBIR program is consolidated in this program element during the year of execution.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Threat Reduction Agency			Date: March 2023
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	Project (Number/Name) RA / *Information Sciences and Applications*	

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
RA: *Information Sciences and Applications*	109.737	16.870	0.000	0.000	-	0.000	0.000	0.000	0.000	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Funding is not allocated until the year-of-execution. Program Element 0605502BR “Small Business Innovation Research (SBIR)” is used to report year-end execution. FY 2023 and FY 2024 Plans are provided based on estimated SBIR/STTR funding levels to be determined in accordance with the law and relative to final Agency RDT&E portfolio appropriations.

A. Mission Description and Budget Item Justification

The Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) programs provide the means for stimulating technological innovation in the private sector and strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs. These programs foster and encourage participation of minority and disadvantaged businesses in technological innovation and increase the commercial application of DoD supported research and development results. These efforts are responsive to Public Law 106-554 and the Small Business Act (15 U.S.C. 638).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: RA: Information Sciences and Applications	16.870	0.000	0.000
Description: This project provides the means for stimulating technological innovation in the private sector; strengthens the role of small business in meeting the DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554. ***FY 2023 Plans:*** Counter Weapons of Mass Destruction (CWMD) (approximately $16.591M). - Distributed, Cooperative, Learning for Subterranean Robotic Autonomous Systems project seeks the capability for its robotic systems to explore and exploit improved communication capabilities enabling systems to better operate in GPS denied and communications limited environments. - Global Nano Aerial Terrestrial Sensing (GNATS) project intends to develop and demonstrate an innovative robotic system showcasing a nano aerial vehicle (NAV) marsupial concept with a GPS-denied guidance capability to advance the state of Counter Weapons of Mass Destruction (C-WMD) missions.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Threat Reduction Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	**Project (Number/Name)** RA / *Information Sciences and Applications*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Battlefield Radiation Detector project intends to develop an algorithm that can locally link radiation detectors (of different resolutions) to enhance identification and localization capability. Project goals include development of network hosted algorithms to link multiple and disparate battlefield RN detectors to enable the fusing and processing of raw detector outputs into usable information. - Framework for Application Lifecycle Management and Continuous Integration for High Performance Computing (HPC) architectures intends to develop a secure Application Lifecycle Management (ALM) and Continuous Integration / Continuous Delivery (CI/CD) framework for legacy codes. Such a capability would integrate existing tools into a cohesive framework to automate a series of steps such as test suites, ensuring code coverage of testing, version control, and streamlining of build process and bookkeeping of these steps/tests/versions. - Modernized Low Visibility RF Radio Capability project intends to develop a low visibility, jamming resistant, RF radio that is compatible with current CWMD sensors and operates on the Tactical Assault Kit (TAK) ecosystem. It will facilitate low-visibility CBRN Search Operations by the Technical Support Groups. ***FY 2024 Plans:*** Program efforts may include the following Counter Weapons of Mass Destruction (CWMD) projects. (approximately $17.380M). - Geiger–Müller Tube Alternative with Electronics project intends to develop and field an alternative to current Geiger–Müller tubes. The intent is to include an accompanying acquisition and analysis of electronics that will provide similar or enhanced detection capabilities while also allowing the instrument to operate in a high radiation environment without causing damage to the detector or the electronics. - Graphene and helix shaped steel fiber dosed concrete for electromagnetic pulse (EMP) and Blast Protection project plans to develop and demonstrate commercially viable building construction techniques with light-weight concrete, stay-in-place forms, and structural poured concrete both dosed with graphene and screw shaped steel microfibers to provide electrically conductive, thermally insulated, ultra-strong, blast, fire and EMP resistant buildings. - Perovskite Radiation Detectors and Imagers project plans to develop a portable, handheld, high-resolution, low operating voltage, spectroscopic-capable radiation detector using direct semiconductor radiation sensing elements that are based on perovskites. The detector could be carried by the warfighter or easily integrated into light vehicles to enable the operator to identify radioisotopes present in the battlefield or operational environment.			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Defense Threat Reduction Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	**Project (Number/Name)** RA / *Information Sciences and Applications*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
- Subterranean Wireless Communications for Counter-WMD Missions project intends to further novel means to provide practical wireless communications which outperform traditional free-space radio frequency (RF) communications in subterranean environments during DoD CWMD missions. Efforts will explore methods to characterize technology performance in underground spaces, especially man-made underground facilities typical of those used for production, storage, and deployment of weapons of mass destruction (WMDs) then demonstrate the ability of the technology to be used for remote operation of multiple robotic systems in an environment typifying an underground facility used for WMD production, storage, or use. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** N/A			
Accomplishments/Planned Programs Subtotals	16.870	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 23/0602718BR: *COUNTER WEAPONS OF MASS DESTRUCTION APPLIED RESEARCH*	45.294	32.140	37.218	-	37.218	37.914	29.639	30.543	31.213	Continuing	Continuing
• 33/0603160BR: *COUNTER WEAPONS OF MASS DESTRUCTION ADVANCED TECHNOLOGY DEVELOPMENT*	76.268	78.991	86.415	-	86.415	90.571	88.687	89.660	92.136	Continuing	Continuing
• 105/0604551BR: *CATAPULT INFORMATION SYSTEM*	6.979	7.130	8.328	-	8.328	7.475	7.625	7.777	7.933	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Defense Threat Reduction Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	**Project (Number/Name)** RA / *Information Sciences and Applications*

Remarks

N/A - SBIR/STTR program funding was executed in Budget Activity 6 and, therefore, does not require an R-3.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Defense Threat Reduction Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	**Project (Number/Name)** RA / *Information Sciences and Applications*

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
N/A								[redacted]																				

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Defense Threat Reduction Agency		Date: March 2023
Appropriation/Budget Activity 0400 / 5	**R-1 Program Element (Number/Name)** PE 0605502BR / *SMALL BUSINESS INNOVATION RESEARCH*	**Project (Number/Name)** RA / *Information Sciences and Applications*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
N/A	4	2023	3	2025

Note

N/A - SBIR/STTR program funding was executed in Budget Activity 6 and, therefore, does not require an R-4 or an R-4a.