Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Defense Logistics 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 0605502S / *Small Business Innovative Research (SBIR)*

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	59.747	8.606	11.500	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
01: *Small Business Innovative Research*	59.747	8.606	11.500	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Logistics Agency's (DLA's) ability to deliver Americans the right logistics solution in every transaction requires more than successful management of the Agency's wholesale supplies and suppliers. It requires supply chain excellence. Our military's ability to generate and sustain combat readiness indefinitely, anywhere on the globe requires that DLA-managed materiel flow seamlessly and as needed from the nation's industrial base to where it is ultimately used.

DLA's Small Business Innovative Research (SBIR) program seeks to solicit innovative research and development proposals from the small business community to address DLA's strategic and operational requirements. All selections shall demonstrate and involve some technical risk with yet to be determined technical feasibility. Phase I proposals should demonstrate the feasibility of the proposed technology and provide a strong business case for Phase II investment for a prototype or at least a proof-of-concept demonstration. A favorable return on investment and commercialization potential have a strong influence on Phase II selections.

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	8.606	11.500	0.000	-	0.000
Total Adjustments	8.606	11.500	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	8.606	11.500			

Change Summary Explanation

FY 2021:
Defense Logistics Agency (DLA) SBIR/STTR taxes are $4.275 million and Defense Microelectronics Agency (DMEA) are $4.330 million.

FY 2022:
Defense Logistics Agency (DLA) SBIR/STTR taxes are $4.879 million and Defense Microelectronics Agency (DMEA) are $6.621 million.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Defense Logistics Agency			Date: April 2022
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502S / *Small Business Innovative Research (SBIR)*	Project (Number/Name) 01 / *Small Business Innovative 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
01: *Small Business Innovative Research*	59.747	8.606	11.500	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Small Business Innovation Program (SBIP) 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 technologies with a defense application as well as a commercial value. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future DLA operational and sustainment requirements. DLA strives to make it fast and easy for customers to work with our Agency by quickly understanding current requirements and anticipating their future needs. In support of the major subordinate commands and military Services, Small Business Innovation Research (SBIR) helps to ensure readiness and lethality across the end-to-end supply chain by optimizing retail and industrial support, which ultimately reduces risk and increases efficiency, and positions solutions for Warfighter requirements.

Dual-use means the technologies will be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new DLA technologies, and as a route to national economic growth through new commercial products. DLA will conduct the competition as well as award and manage the contracts.

The DLA's SBIR/STTR investments are divided into multiple Research Areas that are aligned with the National Defense Strategy and the DLA Strategic Plan.

DLA R&D SBIP Strategic Focus Areas

- Nuclear Enterprise Support: To maintain nuclear weapons systems readiness, SBIP seeks to qualify alternate sources of supply through the reverse engineering of technical data and/or source approval processes to improve availability for consumable parts for weapons systems with limited or diminishing sources of supply.

- Force Readiness and Lethality: To improve life cycle performance through technological advancement, innovation and reengineering, SBIP strives to mitigate single points-of-failure that threaten the readiness of weapons systems used by our Warfighters.

- Supply Chain Innovation: To maintain a secure and resilient supply chain, SBIP provides opportunities for our small business industrial base to engage in technological innovations that enhance supply chain operations, improve procurement lead times, and reduce life cycle costs.

- Supply Chain Assurance: To ensure supply chain readiness, SBIP endeavors to secure the microelectronics supply chain, adopt industrial base best practices associated with counterfeit risk reduction, and develop a domestic supply of rare earth elements essential to maintain the integrity of DLA’s complex supply chain.

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DMEA
- Advanced microelectronics concepts, technologies, and applications

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: SBIR Accomplishments/Plans	8.606	11.500	0.000

Description: DLA FY 2021 SBIR/STTR Accomplishments:
- Grew Small Business capability to combat repair part sourcing challenges associated with weapon system aging, obsolescence, and DMSMS through innovation, reverse engineering, and advanced manufacturing techniques—510 projects awarded; 141 complete
- Developed domestic suppliers for critical REEs, and derived materials and parts, such as magnets. Successfully developed recycling technologies for rare earth elements/magnets and qualified products for a drop-in replacement for high performance weapons systems (i.e. – F-35s/F-16s, JDAMs, turbine engines for various fighter jets, etc.)
- Sponsored innovative manufacturing technologies to enhance supply chain operation and improve weapon system lifecycle performance (i.e. – Fuel Cells, A/C Canopy Seals, Braking Systems, etc.)
- Developed Additive Manufacturing process monitoring and control system for Laser Powder Bed Fusion and Directed Energy Deposition methods – Transition system to OEMs, Army ARL, Air Force, NASA and other research institutions.

DMEA SBIR/STTR:
Continue to seek innovative technical solutions to DOD microelectronics research and development needs and increase private sector commercialization of these innovations.

DMEA FY 2021 SBIR Accomplishments - The SBIR Program contributed to the advancement of microelectronics concepts, technologies, and applications through the following topics initiated in FY21:
- 4H-SiC BiCMOS Development on 6” wafers in a High-Volume Production Foundry
- Highly-Integrated SiC BiCMOS/Power Device Technology: Design, Modeling, and Reliability Metrics
- Manufacturing Platform for High-Temperature CMOS ICs on SiC
- Intelligent Automatic Serial Sectioning using Short Pulse Laser Polygon Scanning
- Robotic Microelectronic Planar Serial Sectioning System (21-RD-282)

DMEA FY 2021 STTR Accomplishments - The STTR Program contributed to the advancement of microelectronics concepts, technologies, and applications through the following topics initiated in FY21:
- Micro-Supercapacitor for Integration with MEMS Energy Harvesting and CMOS ICs
- High-Performance Zinc-ion Hybrid MEMS Supercapacitors with High Energy Density
- Graphenated Carbon Nanotube Based MEMS Supercapacitors
- Energy & Power Densed Supercapacitor: On-Chip Integration in MEMs Fabrication

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
- Integrated Micro Super-Capacitors via Laser Induced Graphene from Photoresist ***FY 2022 Plans:*** DLA SBIR/STTR: - Continue to expand Small Business capability ($2 million) to combat repair part sourcing challenges associated with weapon system aging, obsolescence, and DMSMS through innovation, reverse engineering, and advanced manufacturing techniques - Expand domestic suppliers for critical REEs ($1 million), and derived materials and parts, such as magnets. Refine recycling technologies for rare earth elements/magnets and qualified products for a drop-in replacement for high performance weapons systems (i.e. – F-35s/F-16s, JDAMs, turbine engines for various fighter jets, etc.) - Continue sponsorship of innovative manufacturing technologies to enhance supply chain operation and improve weapon system lifecycle performance ($1 million) (i.e. – Fuel Cells, A/C Canopy Seals, Braking Systems, etc.) - Further deploy and advance Additive Manufacturing process monitoring and control system for Laser Powder Bed Fusion and Directed Energy Deposition methods as well as develop advance Additive Manufacturing metal powder materials ($200 thousand). - The remaining balance ($679 thousand) is for program support, permissible 3% (Admin Plan funding). DMEA SBIR/STTR: Continue to seek innovative technical solutions to DOD microelectronics research and development needs and increase private sector commercialization of these innovations. ***FY 2023 Plans:*** DLA SBIR/STTR: Continue execution of all active Phase I and Phase II SBIR/STTR Projects. Work with other R&D Programs and other divisions with DLA to identify requirements that meet DLA's long and short term Strategic Objectives. Provide adequate guidance and mentorship to Phase II to projects to increase the likelihood of transition into government programs of record or commercial ventures. Issue Phase III contracts. DMEA SBIR/STTR: Continue to seek innovative technical solutions to DOD microelectronics research and development needs and increase private sector commercialization of these innovations. Emerging results from these FY 2022 SBIR efforts will be reported in FY 2023: - Synthesizable Register Transfer Logic (RTL) Assertions			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
- Ultra High Voltage Silicon Carbide (SiC) Gated Devices ***FY 2022 to FY 2023 Increase/Decrease Statement:*** SBIR and STTR tax amounts are based on enacted budgets. FY 2023 had a higher amount of Congressional Adds than FY 2022.			
Accomplishments/Planned Programs Subtotals	8.606	11.500	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

The SBIR acquisition process seeks to match projects with DLA's Strategic Focus Areas. The goal is to align SBIR/STTR developed technology with current and future DLA requirements. DLA solicits all new project execution work through the DOD SBIR Broad Agency Announcement (BAA). There are three separate solicitation periods throughout each year. (Jan-Feb, May-Jun, and Sep-Oct)