Exhibit R-2, RDT&E Budget Item Justification: PB 2023 United States Special Operations Command	Date: April 2022
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 2: *Applied Research*	**R-1 Program Element (Number/Name)** PE 1160401BB / *SOF Technology Development*

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	625.167	47.657	51.329	49.174	-	49.174	52.287	49.101	48.802	49.778	Continuing	Continuing
S100: *SOF Technology Development*	625.167	47.657	51.329	49.174	-	49.174	52.287	49.101	48.802	49.778	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element enables United States Special Operations Command (USSOCOM) to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects. Applying small incremental amounts of investments to the Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire disruptive solutions and emerging technologies for Special Operations Forces (SOF). This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives. This investment strategy is aligned to establish future SOF capability in support of Joint Warfighting Concepts.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	49.464	44.829	0.000	-	0.000
Current President's Budget	47.657	51.329	49.174	-	49.174
Total Adjustments	-1.807	6.500	49.174	-	49.174
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	6.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.807	-			
• Adjustments to Budget Year	-	-	49.174	-	49.174

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Project: S100: *SOF Technology Development*		
Congressional Add: *National Consortium for the Study of Terrorism*	6.746	-
Congressional Add: *Sustained Human Performance and Resilience*	4.816	5.000
Congressional Add: *Classified Sub-Project*	-	1.500

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 United States Special Operations Command	Date: April 2022
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 2: *Applied Research*	**R-1 Program Element (Number/Name)** PE 1160401BB / *SOF Technology Development*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2021	FY 2022
Congressional Add Subtotals for Project: S100	11.562	6.500
Congressional Add Totals for all Projects	11.562	6.500

Change Summary Explanation

Funding:

FY 2021: Net decrease of $1.807 million is due to a reprogramming of funds to the congressionally mandated Small Business Innovative Research (SBIR)/Small Business Technology Transfer (STTR) programs.

FY 2022: Net increase of $6.500 million is due to a Congressional Add for sustained human performance and resilience ($5.000 million) and a Congressional Add for a Classified sub-project, details will be provided under separate cover ($1.500 million).

FY 2023: FY 2023 funding increase of $49.174 million reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

FY 2023 funding request was reduced by $3.124 million to account for the availability of prior year execution balances.

Exhibit R-2A, RDT&E Project Justification: PB 2023 United States Special Operations Command			Date: April 2022
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / *SOF Technology Development*	Project (Number/Name) S100 / *SOF Technology Development*	

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
S100: *SOF Technology Development*	625.167	47.657	51.329	49.174	-	49.174	52.287	49.101	48.802	49.778	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments and leverages other organizations' technology projects. Small incremental co-investments with Department of Defense (DOD), other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, and technology objectives through key stakeholder relationships with the DOD and government technology developers. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: SOF Technology Development	32.170	40.670	45.011
Description: This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments and leverages other organizations' technology projects. This project will continue to exploit and integrate emerging technologies to enable SOF to conduct assigned military responsibilities and expand in support of integrated deterrence. Increases focus on Next Generation Effects, particularly effects that are scalable or non-kinetic; capitalizes on commercial and government discoveries in data and analytics; explores future emplacement and access opportunities, sensor and sensor fusion technology, and biotechnologies and human interface capabilities. Also funds experimentation and concept development to equip the future SOF warfighter.			
FY 2022 Plans: Continue ongoing technology development projects in areas such as, but not limited to: enabling power technologies; electromagnetic spectrum; data analytics; signature reduction technologies; high data-rate throughput; and advances in lightweight materials. Advance technologies for combat medical equipment, biotechnologies, tactics, human performance, sensors, information sources, and processing improvements, improve human-machine interfaces and displays, identify SOF specific machine learning/artificial intelligence, and secure communications. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes.			
FY 2023 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 United States Special Operations Command		Date: April 2022
Appropriation/Budget Activity 0400 / 2	**R-1 Program Element (Number/Name)** PE 1160401BB / *SOF Technology Development*	**Project (Number/Name)** S100 / *SOF Technology Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Continues ongoing technology development projects in areas such as, but not limited to: enabling power technologies; electromagnetic spectrum; data analytics; signature reduction technologies; high data-rate throughput; and advances in lightweight materials. Advances technologies for combat medical equipment, biotechnologies, tactics, human performance, sensors, information sources, and processing improvements, improves human-machine interfaces and displays, identifies SOF specific machine learning/artificial intelligence, and secure communications. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of $4.341 million supports USSCOM's focus on advanced research and development in artificial intelligence, machine learning, computing power and autonomous systems that will provide increased capability to SOF operators and platforms.			
Title: Classified Sub-Project ***Description:*** Classified Sub-Project (provided under separate cover). ***FY 2022 Plans:*** Details provided under separate cover. ***FY 2023 Plans:*** Details provided under separate cover. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of $0.004 million will be provided under separate cover. This Sub-project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.	3.925	4.159	4.163
Accomplishments/Planned Programs Subtotals	36.095	44.829	49.174

	FY 2021	FY 2022
Congressional Add: National Consortium for the Study of Terrorism	6.746	-
FY 2021 Accomplishments: Established Joint Special Operations University (JSOU) Advanced Research efforts for Irregular and Asymmetric Warfare in partnership with OSD Research and Engineering (R&E). Expanded the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The START effort will be awarded to the University of Maryland, College Park as the lead for the National Consortium for the Study of Terrorism in September 2021, using data sets and scientists' findings regarding Irregular and Asymmetric Warfare topics specific to SOF that support integrative statecraft and applied scenario testing. The deliverable for START is an academic study conducted by a consortium of university-based research entities		

Exhibit R-2A, RDT&E Project Justification: PB 2023 United States Special Operations Command		Date: April 2022
Appropriation/Budget Activity 0400 / 2	**R-1 Program Element (Number/Name)** PE 1160401BB / *SOF Technology Development*	**Project (Number/Name)** S100 / *SOF Technology Development*

	FY 2021	FY 2022
who will develop a wargame to explore multi-national and inter-agency challenges integral to Irregular Warfare conducted by SOF. Upon completion of the applied research effort, the consortium will deliver proposed updates to JSOU's existing curriculum and training programs of instruction and will be incorporated into courses by Academic Year 2022.		
Congressional Add: Sustained Human Performance and Resilience ***FY 2021 Accomplishments:*** Continued ongoing development of human performance technology development projects, including performance nutrition and supplementation, achieving the results of exercise via alternative methods, maximizing cognitive performance, musculoskeletal injury prediction, sleep restoration, holistic assessment (e.g., physical/cognitive metrics, biomarkers, and genomics), and tracking of exposures throughout a SOF Operator's career. Continued pursuit of methods to reduce operator load and improve human-machine interfaces and displays. ***FY 2022 Plans:*** Continue ongoing development of human performance technology development projects, including performance nutrition and supplementation, achieving the results of exercise via alternative methods, maximizing cognitive performance, musculoskeletal injury prediction, sleep restoration, holistic assessment (e.g., physical/cognitive metrics, biomarkers, and genomics), and tracking of exposures throughout a SOF Operator's career. Continue pursuit of methods to reduce operator load and improve human-machine interfaces and displays.	4.816	5.000
Congressional Add: Classified Sub-Project ***FY 2022 Plans:*** Additional details can be provided under separate cover. This Sub-project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.	-	1.500
Congressional Adds Subtotals	11.562	6.500

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A