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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 United States Special Operations Command **Date:** March 2023

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>
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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	672.820	49.458	58.909	52.287	-	52.287	49.101	48.802	49.778	50.773	Continuing	Continuing
S100: <i>SOF Technology Development</i>	672.820	49.458	58.909	52.287	-	52.287	49.101	48.802	49.778	50.773	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element enables the 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 the 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 the 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. This PE received Congressional Adds in FY 2022 for Long Range Unmanned Surface Vessel (LRUSV) asymmetric strike and decoy package (\$1.500 million) and sustained human performance and resilience (\$5.000 million). This PE also received Congressional Adds in FY 2023 for signature management improvements (\$4.500 million) and assessment of commercial system (\$5.235 million).

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	51.329	49.174	52.287	-	52.287
Current President's Budget	49.458	58.909	52.287	-	52.287
Total Adjustments	-1.871	9.735	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	9.735			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.871	-			

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S100: *SOF Technology Development*

Congressional Add: *Sustained Human Performance and Resilience*

Congressional Add: *Classified Project*

Congressional Add: *Signature Management Improvements*

	FY 2022	FY 2023
	4.817	-
	1.445	-
	-	4.500

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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Congressional Add: *Assessment of Commercial Systems*

Congressional Add Subtotals for Project: S100

Congressional Add Totals for all Projects

	FY 2022	FY 2023
	-	5.235
	6.262	9.735
	6.262	9.735

Change Summary Explanation

Funding:

FY 2022: Net decrease of \$1.871 million is due to a reprogramming of funds to the congressionally mandated Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) programs.

FY 2023: Net increase of \$9.735 million is due to Congressional Adds for Signature Management Improvements (\$4.500 million) and Assessment of Commercial Systems (\$5.235 million).

FY 2024: None

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Exhibit R-2A, RDT&E Project Justification: PB 2024 United States Special Operations Command **Date:** March 2023

Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>				Project (Number/Name) S100 / <i>SOF Technology Development</i>			
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
S100: <i>SOF Technology Development</i>	672.820	49.458	58.909	52.287	-	52.287	49.101	48.802	49.778	50.773	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 the Department of Defense (DoD), other government agencies, and commercial organizations allow the 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 2022	FY 2023	FY 2024
<p>Title: SOF Technology Development</p> <p>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. This project also funds experimentation and concept development to equip the future SOF warfighter.</p> <p>FY 2023 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, improves human-machine interfaces and displays, identify SOF specific machine learning/artificial intelligence, and secure communications. Based upon agreed technology maturity metrics, transfer 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.</p> <p>FY 2024 Plans:</p>	39.189	45.011	48.027

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>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.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase of \$3.016 million supports the USSOCOM’s focus on advanced research and development in artificial intelligence, machine learning, digital signature management, sensor integration, non-kinetic attack, and human performance and resiliency in support of the 2022 National Defense Strategy.</p>			
<p>Title: Classified Project</p> <p>Description: Classified Project (provided under separate cover).</p> <p>FY 2023 Plans: Details provided under separate cover.</p> <p>FY 2024 Plans: Details provided under separate cover.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase of \$0.097 million will be provided under separate cover. This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.</p>	4.007	4.163	4.260
Accomplishments/Planned Programs Subtotals	43.196	49.174	52.287

	FY 2022	FY 2023
<p>Congressional Add: Sustained Human Performance and Resilience</p> <p>FY 2022 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</p>	4.817	-

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		FY 2022	FY 2023
a SOF Operator's career. Continued pursuit of methods to reduce operator load and improve human-machine interfaces and displays.			
Congressional Add: Classified Project		1.445	-
FY 2022 Accomplishments: Additional details provided under separate cover. This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.			
Congressional Add: Signature Management Improvements		-	4.500
FY 2023 Plans: This effort funds the fabrication of initial small unmanned aerial systems (sUAS) prototypes based on design work completed under an FY 2022 Congressional Add. The sUAS will be a purpose-built, Government-owned unmanned platform with the payload, range, speed and survivability required by the USSOCOM operators to complete their mission.			
Congressional Add: Assessment of Commercial Systems		-	5.235
FY 2023 Plans: Identify and characterize capability enablers such as digital twins, synthetic virtual and constructive simulations, range and operator sensor instrumentation, secure network and "quantum-safe" protocols and Internet of Things device integration and tracking for potential inclusion and incorporation into CASPER.			
Congressional Adds Subtotals		6.262	9.735
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			