

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army **Date:** March 2023

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603044A / <i>Soldier Advanced Technology</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
Total Program Element	-	0.858	0.479	1.214	-	1.214	3.913	4.158	3.951	4.497	0.000	19.070
CN8: <i>Soldier Enabled University Advanced Development</i>	-	0.858	0.479	0.587	-	0.587	2.868	2.797	2.799	2.829	0.000	13.217
CW1: <i>Technical-SAVVY Soldier Advanced Research</i>	-	-	-	0.627	-	0.627	1.045	1.361	1.152	1.668	0.000	5.853

A. Mission Description and Budget Item Justification

This Program Element (PE) matures, optimizes, and validates applied research technologies to demonstrate improved capabilities and systems that advance Soldier and Squad lethality-overmatch and Soldier performance beyond those technologies planned within the Soldier Lethality Cross-Functional Team. Advanced technology research efforts focus on the maturation and integration of broad capabilities and systems that span a range of technical areas to address enduring Soldier needs. These efforts transition outputs to existing and emerging systems in support of continuing enhancement of Soldier capabilities. This PE will fund civilian salaries for in-house researchers/scientists and program managers collaborating with external subject matter experts in academia and industry who are leaders in these technology research areas.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States (US) Army Futures Command (AFC).

B. Program Change Summary (\$ in Millions)	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>
Previous President's Budget	0.890	0.479	1.208	-	1.208
Current President's Budget	0.858	0.479	1.214	-	1.214
Total Adjustments	-0.032	0.000	0.006	-	0.006
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.032	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.006	-	0.006

Change Summary Explanation

Increased funding due to revised economic assumptions.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 3					R-1 Program Element (Number/Name) PE 0603044A / <i>Soldier Advanced Technology</i>				Project (Number/Name) CN8 / <i>Soldier Enabled University Advanced 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
CN8: <i>Soldier Enabled University Advanced Development</i>	-	0.858	0.479	0.587	-	0.587	2.868	2.797	2.799	2.829	0.000	13.217
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project leverages advanced technological innovations from academia to accelerate the optimization and demonstration of improved capabilities and systems that advance Soldier and Squad lethality-overmatch and Soldier performance and meet mission needs in the future operating environments. This Project funds collaborative, enduring advanced extramural university-based maturation and demonstration of technologies and brings together competitively selected universities with Army research teams into Technical Alliances. This Project will focus efforts on mid- to far-term Army modernization priorities while also maintaining delivery of near-term technologies critical to supporting the modernization priorities. The technical scope of this Project includes the optimization, maturation and demonstration of overarching Soldier-centric technologies including human systems integration, simplified synthetic training environments, advanced protective materials, power and energy, Warfighter endurance, robotics, as well as other innovative Soldier enabled advanced research technologies that will accelerate the Army modernization in Synthetic Training Environment, and Soldier Lethality. This Project conducts advanced research and development leading to potential emerging technologies in areas of strategic importance to the Army in Soldier capabilities related to increased protection, performance, agility, situational awareness, and lethality. This Project will also continuously strive to engage and collaborate with entities that might not otherwise collaborate with the Department of Defense (DoD) to demonstrate and provide novel Soldier-centric technologies for accelerating the adoption of emerging technologies for the Warfighter in the Army Soldier portfolio.

Work in this Project complements Program Element 0603118A (Soldier Lethality Advanced Technology).

The work cited is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Advanced Soldier Performance and Training	0.574	0.462	0.587
Description: Mature and demonstrates Soldier capabilities related to increased protection, performance, agility, situational awareness, training, and lethality.			
FY 2023 Plans: Down-select, optimize, and validate with Soldier input mobile monitoring technologies, including digital/wireless biosensors, to identify conditions that might impede peak Soldier performance and enable Warfighter readiness.			
FY 2024 Plans:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023		
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603044A / <i>Soldier Advanced Technology</i>	Project (Number/Name) CN8 / <i>Soldier Enabled University Advanced Development</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Prototype data lake environment and data ecosystem to refine the synthetic training environment data management architecture; mature and demonstrates technologies to monitor health, cognitive state and readiness of Warfighters through digital biosensors. FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase reflects planned lifecycle of this effort with increased user feedback				
Title: Soldier Advanced Materials for the Integrated Combat Platform Description: Optimize and mature advanced materials and electronics that are standardized to the Soldier and their equipment through integrated combat platform.		0.284	-	-
Title: SBIR/STTR Transfer FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638 FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638		-	0.017	-
Accomplishments/Planned Programs Subtotals		0.858	0.479	0.587
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 3					R-1 Program Element (Number/Name) PE 0603044A / <i>Soldier Advanced Technology</i>				Project (Number/Name) CW1 / <i>Technical-SAVVY Soldier Advanced Research</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
CW1: <i>Technical-SAVVY Soldier Advanced Research</i>	-	-	-	0.627	-	0.627	1.045	1.361	1.152	1.668	0.000	5.853
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Project CW1 (Technical-SAVVY Soldier Advanced Research) is a New Start in Fiscal Year 2024 (FY24).

A. Mission Description and Budget Item Justification

This project conducts applied technology development to provide critical breakthroughs in developing a "technologically" fluence force. This research will refine, adapt, and validate methods and measures to assess and develop the technological fluency (TF) of Soldiers across a career (TF Personnel Assessments) and technologies to maximize technological fluency resilience and performance in Soldiers and units (Maximizing TF). TF is defined as the ability of Soldier and units to use and rapidly adapt new and intelligent technologies without formal training on these technologies, and it will be a decisive factor in a future operating environment in which Soldiers and squads are teamed with increasingly sophisticated and evolving technologies. Soldiers and leaders in specialty areas (e.g., Cyber, and Emerging Tech) and general purpose forces will require increased technological aptitudes and skills to adapt emerging technologies to evolving mission sets and avoid being overmatched by Artificial Intelligence (AI)-enabled "smart" technologies.

This Project supports key Army needs and will coordinate and/or leverage findings of several PEs to include 0602184A (Soldier Applied Research), and 0603007A (Manpower, Personnel and Training Advanced Technology).

This research will be performed by the U.S. Army Research Institute (ARI) for Behavioral and Social Sciences, and in coordination with collaborative research between ARI and the Combat Capability Development Command - Army Research Laboratory (ARL) performed within 0602184A (Soldier Applied Research).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas, the Army Modernization Strategy, and the Army People Strategy.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: Soldier Technical Enhancement Advanced Research	-	-	0.627
FY 2024 Plans: Will initiate validation of assessment instruments to assess Technological Fluency (TF) attributes.			
FY 2023 to FY 2024 Increase/Decrease Statement: This is a New Start for FY24.			
Accomplishments/Planned Programs Subtotals	-	-	0.627

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603044A / <i>Soldier Advanced Technol ogy</i>	Project (Number/Name) CW1 / <i>Technical-SAVVY Soldier Advanced Research</i>

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A