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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army **Date:** April 2022

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>
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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	-	-	0.890	0.479	-	0.479	1.208	3.891	4.131	3.921	0.000	14.520
CN8: <i>Soldier Enabled University Advanced Development</i>	-	-	0.890	0.479	-	0.479	0.584	2.852	2.779	2.778	0.000	10.362
CW1: <i>Technical-SAVVY Soldier Advanced Research*</i>	-	-	-	-	-	-	0.624	1.039	1.352	1.143	0.000	4.158

*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2023

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)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	0.890	0.000	-	0.000
Current President's Budget	0.000	0.890	0.479	-	0.479
Total Adjustments	0.000	0.000	0.479	-	0.479
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.479	-	0.479

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Appropriation/Budget Activity
2040: *Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)*

R-1 Program Element (Number/Name)
PE 0603044A / *Soldier Advanced Technology*

Change Summary Explanation

Fiscal Year 2023 (FY23) funding increase reflects the fact that the FY22 President's Budget request did not include out-year funding.

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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 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
CN8: <i>Soldier Enabled University Advanced Development</i>	-	-	0.890	0.479	-	0.479	0.584	2.852	2.779	2.778	0.000	10.362
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.

Research in this Project supports the Army Modernization Priorities of Synthetic Training Environment and Soldier Lethality, and the overall Soldier science and technology (S&T) portfolio.

The cited research is consistent with 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.

Research in this Project complements and supports transitions from Soldier Enabling University Applied Research in Program Element 0602184A (Soldier Applied Research).

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

	FY 2021	FY 2022	FY 2023
Title: Advanced Soldier Performance and Training	-	0.574	0.479
Description: Mature and demonstrates Soldier capabilities related to increased protection, performance, agility, situational awareness, training, and lethality.			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p><i>FY 2022 Plans:</i> Further mature and integrate reliable monitoring and assessment technologies for the health and readiness of Warfighters through digital/wireless biomarkers and biosensors; comprehensive automated testing framework to guarantee that synthetic training environments are highly trustworthy, reliable, and usable.</p> <p><i>FY 2023 Plans:</i> 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.</p> <p><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funding change reflects the realignments to Program Element (PE) 0603116A (Lethality Advanced Technology) / CG2 (Lethality Enabling University Adv Development).</p>				
<p><i>Title:</i> Soldier Advanced Materials for the Integrated Combat Platform</p> <p><i>Description:</i> Optimize and mature advanced materials and electronics that are standardized to the Soldier and their equipment through integrated combat platform.</p> <p><i>FY 2022 Plans:</i> Mature Soldier electronics technology and optimize server processing to enable real-time data/video analytics and faster target detection capabilities. Mature and demonstrate advanced materials, such as flexible, energy storage, self-healing and super materials, for increased protection, power, and wireless technology to further integrate with the Soldier and Squad combat platform.</p> <p><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funding change reflects the realignments to PE 0603116A (Lethality Advanced Technology) / CG2 (Lethality Enabling University Adv Development).</p>		-	0.284	-
<p><i>Title:</i> SBIR/STTR Transfer</p> <p><i>FY 2022 Plans:</i> Funding transferred in accordance with Title 15 USC ?638</p> <p><i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> Funding transferred in accordance with Title 15 USC ?638</p>		-	0.032	-
Accomplishments/Planned Programs Subtotals		-	0.890	0.479

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

Remarks

D. Acquisition Strategy
N/A