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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i>					R-1 Program Element (Number/Name) PE 0603025A / <i>Army Agile Innovation and Demonstration</i>							
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	-	-	22.231	-	22.231	-	-	-	-	-	-
CK8: <i>Advanced Technology Development and Convergence</i>	-	-	-	22.231	-	22.231	-	-	-	-	-	-

Note

In Fiscal Year (FY) 2022, this is a new program element.
 Funding was realigned from:
 Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program

A. Mission Description and Budget Item Justification

This Program Element funds the Army's goal of accelerating innovative solutions to achieve future force modernization. The Army is developing new ways of doing business to include strategic and "non-traditional" partnerships and working with traditional vendors in novel ways to allow for agile integration of leading-edge technology. Critical technologies that allow for technological superiority are increasingly dual-use or developed in academia-led partnerships that leverage cutting edge innovation. In an era of global competition, technological superiority requires agile and rapid innovation. Cross-cutting modernization initiatives leverage strategic partnerships foster an environment to bring knowledge and expertise to demonstrate breakthrough and innovative technologies that will benefit the warfighter. These collaborations bring new ways of doing business to demonstrate emerging technologies and systems with high payoff potential to address current technology shortfalls or future capability gaps and systems. This Program Element will allow for exploration and adaptation of various technologies in the early stages of development enabling cost saving decisions in the procurement life-cycle by using the try, buy, decide model of identifying and investing in proof of technology demonstrations that the army can adapt and integrate. Leveraging other innovative mechanisms, to include accelerators, incubators, and other technology accelerants, to enhance innovation is part of the overall innovation strategy. Innovation includes not only hardware, and physical products but also software, software development, artificial intelligence (AI) and machine learning, all as stand-alone initiatives and as part of broader innovation to programs and technology development. Oversight from a newly created Innovation Board will evaluate internal and external constraints to implementation on the basis of Army modernization needs, Army standards and resources to inform an optimal technology investment strategy.

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

Work is performed by the United States Army Futures Command.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603025A / <i>Army Agile Innovation and Demonstration</i>
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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	22.231	-	22.231
Total Adjustments	0.000	0.000	22.231	-	22.231
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	22.231	-	22.231

Change Summary Explanation

In Fiscal Year (FY) 2022, this is a new program element, with funding realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army										Date: May 2021		
Appropriation/Budget Activity 2040 / 3					R-1 Program Element (Number/Name) PE 0603025A / Army Agile Innovation and Demonstration				Project (Number/Name) CK8 / Advanced Technology Development and Convergence			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
CK8: <i>Advanced Technology Development and Convergence</i>	-	-	-	22.231	-	22.231	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This is a new start in FY 2022.

In Fiscal Year (FY) 2022, this is a new start.

A. Mission Description and Budget Item Justification

This project aims to accelerate the Army's goal of finding innovative and nontraditional solutions to the most difficult technological problems. Efforts to pair with nontraditional entities, such as industry or the newly established Army Futures Command Software Factory, bring new ways of doing business to demonstrate emerging technologies and systems with high payoff potential to address current technology shortfalls or future capability gaps and systems. Additionally, this project seeks to provide funding for advanced research/technology that has been discovered in "Innovation Days" that are funded across RDT&E.

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

Work in this effort is performed by the United States (US) Army Futures Command.

Work in this Project supports all Army Modernization Priorities.

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

	FY 2020	FY 2021	FY 2022
Title: Advanced Technology Development of Existing Commercial Technology	-	-	6.000
Description: Advanced commercial development exists when direct investment leads to rapid technology applications and demonstration. The Army identifies existing technology to further develop and modify for Army use. Partnerships with industry both traditional and non-traditional, allow the Army to advance non-military commercial research and development investments through focused engagements resulting in commercial adaption and integration to address Army technology and modernization efforts. Initial nominal Army investment in proof of technology and technology demonstrations will expedite novel technologies shaping their development to meet Army requirements and expedite both component and complete system adaptation and integration.			
FY 2022 Plans:			

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Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603025A / Army Agile Innovation and Demonstration	Project (Number/Name) CK8 / Advanced Technology Development and Convergence		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<p>The Army enterprise will identify commercial solutions to technology problem areas focused on next generation combat vehicles, dismounted soldier lethality, power generation and storage, network and satellite support, and novel sensors and technologies.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: This is a FY22 new start. Funding was realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program.</p>				
<p>Title: Sub-System Component and Prototype Convergence</p> <p>Description: The Army investigates, develops, and integrates non-traditional cutting-edge technology. Sub-system component and prototype convergence seeks to develop or integrate one or more technologies to prove out concepts or to merge smaller subsystems towards a more complex solution. This task informs requirements developers where the state of technologies is at, where it is going and on what timeline confirming viability for incorporation into larger technology programs.</p> <p>FY 2022 Plans: Will focus on subsystem component development and maturation of autonomous technologies focused on the integration of disjointed systems, remote predictive maintenance, component hardening (against cyber) of IT and communications systems on manned and unmanned vehicles, network and satellite technologies, and Soldier exoskeletons.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: This is a FY22 new start. Funding was realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program</p>		-	-	4.000
<p>Title: Experimentation and Development of Commercial Dual Use Technologies</p> <p>Description: The Army seeks to connect with industry early in a technology's commercialization process. Experimentation and development will connect with these non-traditional technologies to determine the feasibility and ability to be leveraged against military applications. Technology development will be conducted concurrently to commercial activities with experimentation used to understand proof-of-concept applicability for further Government initiative. As part of this process strategic partnerships will be cultivated with technology aggregators such as In-Q-Tel to ensure a comprehensive approach to connect and transition technologies to the Army.</p> <p>FY 2022 Plans: Will focus experimentation and development on intelligent connectivity between systems and novel sensors and sensor techniques.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: This is a FY22 new start. Funding was realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program.</p>		-	-	5.000
<p>Title: Software Factory Advanced Software Development</p>		-	-	4.900

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p>Description: As part of the novel Software Factory stood up by Army Futures Command (AFC), Soldiers will be leveraged to address some of the most challenging software research problems that the Army faces. Soldiers will adopt an Agile Development Process to rapidly mature experimental software for mobile technology, secure authentication procedures, and other software needs for Army-specific hardware platforms.</p> <p>FY 2022 Plans: Will design, characterize, and mature software supporting Army wide hardware platforms; will develop and demonstrate the ability to quickly route Soldier created software to mobile devices in an iterative fashion; and will integrate Soldier created software into a secure DevOps environment.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: This is a FY22 new start. Funding was realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program</p>			
<p>Title: Demonstration and Development of Army Discovered Innovative Technologies</p> <p>Description: The Army seeks to develop and demonstrate technology that display unique and innovative potential in a cross-domain fashion. This effort seeks to direct advanced research funding towards technologies that are discovered from Army Innovation events such as Innovation Days funded by PE 0605054A (Emerging Technology Initiatives) Project FI3 (Rapid Capability Development and Maturation) or the Expeditionary Technology Search effort in PE 0605803A (Technical Information Activities) Project CC2 (Expeditionary Technologies). This task complements and coordinates with PE 0604115 (Technology Maturation Initiatives) Project AX3 (Technology Maturation Initiatives) task "Innovation Funding".</p> <p>FY 2022 Plans: Will develop and demonstrate unique solutions to Army wide problems leveraging technology discovered through Army technology search events.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: This is a FY22 new start. Funding was realigned from Abrams Recapitalization, RU01GA0750000, Abrams Upgrade Program</p>	-	-	2.331
Accomplishments/Planned Programs Subtotals	-	-	22.231

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

N/A

Remarks

D. Acquisition Strategy

N/A