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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Army **Date:** March 2024

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605706A / <i>Materiel Systems Analysis</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	22.004	26.902	27.420	-	27.420	27.445	27.701	27.967	28.208	0.000	187.647
541: <i>Materiel Sys Analysis</i>	-	22.004	26.902	27.420	-	27.420	27.445	27.701	27.967	28.208	0.000	187.647

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) resources the U.S. Army Combat Capabilities Development Command (DEVCOM) Analysis Center (DAC) to conduct integrated material performance analyses to support Army decisions in technology, materiel acquisition, and the design, development, fielding and sustainment of Army materiel systems. The analysis products funded by this PE are leveraged to support Materiel Acquisition decisions and influence the design, development, and sustainment of Army weapon/materiel systems in support of the current and future force in the areas of Long-Range Precision Fires, Next Generation Combat Vehicles, Future Vehicle Lift, Network/Command, Control, Communications and Intelligence, Air and Missile Defense, Soldier Lethality and other Army Priority efforts.

As the Army's center for integrated materiel performance analysis, the DAC supports Army and Department of Defense (DoD) decision makers throughout the entire acquisition process in responding to analytical requirements across the full spectrum of materiel. The DAC's unique in-house, consistent, integrated analytical capability provides the U.S. Army Futures Command (AFC) and Army leadership with timely, independent, unbiased, reliable, and high quality analysis to support complex decisions required for Current Operations and the development of the Future Force. The DAC's integrated set of skills, tools, and data repository are focused on the highest Army Priorities with a core mission to build the body of evidence and deliver objective analysis and experimentation across the entire life cycle to ensure Readiness today and a more lethal Future Force tomorrow.

This PE develops and certifies system level, and systems-of-systems level, performance and effectiveness data across a broad range of capabilities such as target acquisition, probability of inflicting catastrophic damage, personnel and vehicle survivability, mobility, network, system reliability, and several additional capability areas used in Army studies. The PE funds the development of item-level performance methodology, and Models and Simulations (M&S) for the current and future operational environments and emerging threats. The M&S capabilities support the development, linkage and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined arms environment. This M&S infrastructure provides a hierarchical modeling framework that is unique to the DAC and allows for a comprehensive performance and effectiveness analysis and prediction capability that can be utilized to support trade-off and investment decisions prior to extensive and expensive hardware testing of proposed systems/technologies.

This PE funds the Center for Reliability Growth (CRG), to develop critical tools, methodologies, policies, guidance and educational materials required to help acquisition programs achieve required reliability during the acquisition process. The CRG develops and applies engineering approaches to assess the reliability of Army materiel and provides recommendations on ways to improve reliability, thereby, reducing logistics footprints and life cycle costs, and extending failure-free periods for materiel. The CRG has developed an integrated set of skills and tools focused on its core competencies to be responsive in delivering objective data and analysis across the entire life cycle to ensure Readiness today and a more lethal future force tomorrow.

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B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	22.004	26.902	27.365	-	27.365
Current President's Budget	22.004	26.902	27.420	-	27.420
Total Adjustments	0.000	0.000	0.055	-	0.055
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.055	-	0.055

Change Summary Explanation

Minor increase in FY25 funding from the previous PB to the current PB due to revised economic assumptions.

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Exhibit R-2A, RDT&E Project Justification: PB 2025 Army										Date: March 2024		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605706A / <i>Materiel Systems Analysis</i>				Project (Number/Name) 541 / <i>Materiel Sys Analysis</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
541: <i>Materiel Sys Analysis</i>	-	22.004	26.902	27.420	-	27.420	27.445	27.701	27.967	28.208	0.000	187.647
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

	FY 2023	FY 2024	FY 2025
Title: Materiel Systems Analysis	22.004	26.902	27.420

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605706A / <i>Materiel Systems Analysis</i>	Project (Number/Name) 541 / <i>Materiel Sys Analysis</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
<p>Description: This activity provides for systems and engineering analyses to support the entire Future Force Modernization Enterprise decisions in technology, materiel acquisition, and the design, development, fielding and sustainment of Army materiel systems; the development of system level performance and effectiveness data and item-level performance methodology, and models and simulations; and the development of critical tools, methodologies, policies and guidance as the Center for Reliability Growth to improve reliability, extend failure-free periods, and reduce support costs.</p> <p>FY 2024 Plans: Will develop, maintain, and advance essential verified and validated item/system level methodologies, tools, and models and simulations (M&S) to conduct integrated materiel performance and engineering analyses for AFC's highest priority technologies. Will serve as AFC's repository for the body of technical and quantitative evidence concerning AFC experimentation and Army modernization technologies and systems. For AFC and DEVCOM Centers/ARL, will implement analytical capabilities to inform system cost/ performance trades, early technology development decisions, weapons/systems performance analyses, operational energy analyses, climate change analyses, system technical and schedule risk assessments, business case analyses, cost benefit analyses, requirements definition, technology insertion studies, reliability growth studies, and Physics of Failure analyses. Will continue to provide data and analysis support throughout the Project Convergence Campaign of Learning and other AFC experimentation. Will perform studies to provide essential certified weapons system performance data for AFC and DEVCOM Centers/ARL. Will continue to provide foundational analytical tools and capabilities as the Army's Center for Reliability Growth to improve the reliability of Army systems and technologies. For DEVCOM Centers/ARL, will provide relevant data and results to prototype technology developers, evaluators, senior decision makers, and downstream force-on-force modelers to constructively influence design, mature technologies, and reduce risk.</p> <p>FY 2025 Plans: Will develop methodologies, tools, and models and simulations (M&S) to provide integrated materiel performance and engineering analyses for Artificial Intelligence and Cyber and Electromagnetic Activities to provide an analytic foundation to deliver the Army of 2030 and design the Army of 2040. Will continue to provide data collection/management and analysis, analytic software applications, and database development, maintenance, and integration, as well as M&S for AFC Persistent Experimentation events. Will continue to conduct technology performance and engineering analyses serving as AFC's repository for the body of evidence concerning developmental Army technologies and systems. Will analyze Army energy supply capacity and the difference between supply capacity versus future energy demands. For AFC and DEVCOM Centers/ARL, will implement analytical capabilities to inform system cost/ performance trades, technology development decisions, weapons/systems performance and effectiveness analyses, climate change analyses, system technical and schedule risk assessments, business case analyses, requirements definition, and reliability, availability, and maintainability studies. Will provide certified characteristics and performance data to AFC and DEVCOM Centers/ARL in support of technical studies and Wargames. For DEVCOM Centers/</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2023	FY 2024	FY 2025
ARL, will continue to provide relevant data and results to prototype technology developers, evaluators, senior decision makers, and force-on-force modelers to inform design, mature technologies, and reduce risk.			
<i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Funding increase reflects planned lifecycle of this effort.			
Accomplishments/Planned Programs Subtotals	22.004	26.902	27.420

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

N/A

Remarks

D. Acquisition Strategy

N/A