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

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| Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support</i> | R-1 Program Element (Number/Name) PE 0605604A / <i>Survivability/Lethality Analysis</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 | - | 35.042 | 36.500 | 37.518 | - | 37.518 | 37.529 | 37.575 | 37.975 | 38.389 | 0.000 | 260.528 |
| 675: <i>Army Survivability Analysis & Evaluation Supp</i> | - | 35.042 | 36.500 | 37.518 | - | 37.518 | 37.529 | 37.575 | 37.975 | 38.389 | 0.000 | 260.528 |

A. Mission Description and Budget Item Justification

This funding line supports testing of Army Modernization Priority Programs.

This Program Element (PE) funds objective vulnerability assessment products necessary for the inherently-governmental Army Test & Evaluation Command/Army Evaluation Center (ATEC/ AEC) mission and for the Research and Development and analysis communities. Products result from investigating, analyzing, assessing, experimenting and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest-priority Army and threat systems. Products are leveraged within the Army Futures Command (AFC), the Cross Functional Teams (CFTs) and Program Managers / Program Executive Offices (PM/PEO) to exercise constructive design influence over materiel development and to provide credible engineering-level underpinning and input to the Army Analytical Community.

This PE provides quantitative analyses and data for fielded and developmental systems as the Army pursues its modernization priorities and ensures readiness through the fielding of lethal and survivable systems for multi-domain operations. This PE funds engineering level analysis and experimentation supporting all CFTs including Long Range Precision Fires systems, Next Generation Combat Vehicles, Future Vertical Lift, Network / Command, Control, Communications (C3I), Air & Missile Defense, Soldier Lethality, and other high Army priority efforts. Principal data and analysis domains are integrated materiel performance, cyber resilience, human engineering and performance, Electronic Warfare threat defense, and mission threat analysis.

Assessments funded by this PE are conducted across the spectrum of multi-domain battlefield threats to include: guns, missiles, mines and other methods of inflicting physical damage; jammers, countermeasures, and other electronic warfare techniques; cyber threats from insiders to nation states; and directed energy weapons. Many different kinds of technical capabilities are used to generate these analyses, including specialized equipment, modeling & simulation, and experimental facilities. This PE ensures these capabilities can represent a live, virtual, or constructive hostile environment required for credible assessment, thus enabling evaluators, developers, users, and decision makers to make informed acquisition judgments. This technical data from earliest AFC experimentation to final operational test is retained and serves as AFC's repository of analysis and information for supporting an ever-improving body of evidence to drive Milestone Decisions. This body of evidence enables properly informed decisions concerning acquisition and production; maximizes Army overmatch in systems and tactics; informs investment priorities; and mitigates system weaknesses prior to actual combat.

Technical data and analysis results funded by this PE are efficiently leveraged for many different Army uses, reducing total cost to the Army by eliminating the need for duplicative capabilities funded by individual system developers. Central funding of this mission assures accurate and consistent technical treatment across all formal system Evaluations, and across the Army's analytical community as it conducts analyses of alternatives and other studies. The United States (U.S.) Army Combat Capabilities Development Command (DEVCOM) and ATEC/AEC integrate the results from the work program into Army's formal Evaluation process to ensure ATEC can comply with its legally-mandated responsibility to assess system survivability along with effectiveness and suitability.

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| B. Program Change Summary (\$ in Millions) | FY 2022 | FY 2023 | FY 2024 Base | FY 2024 OCO | FY 2024 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 36.370 | 36.500 | 37.353 | - | 37.353 |
| Current President's Budget | 35.042 | 36.500 | 37.518 | - | 37.518 |
| Total Adjustments | -1.328 | 0.000 | 0.165 | - | 0.165 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | -1.328 | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Adjustments to Budget Years | - | - | 0.165 | - | 0.165 |

Change Summary Explanation

Increased funding due to revised economic assumptions.

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| Exhibit R-2A, RDT&E Project Justification: PB 2024 Army | | | | | | | | | | Date: March 2023 | | |
| Appropriation/Budget Activity 2040 / 6 | | | | | R-1 Program Element (Number/Name) PE 0605604A / <i>Survivability/Lethality Analysis</i> | | | | Project (Number/Name) 675 / <i>Army Survivability Analysis & Evaluation Supp</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 |
| 675: <i>Army Survivability Analysis & Evaluation Supp</i> | - | 35.042 | 36.500 | 37.518 | - | 37.518 | 37.529 | 37.575 | 37.975 | 38.389 | 0.000 | 260.528 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

This Project funds objective vulnerability assessment products necessary for the inherently-governmental Army Test & Evaluation Command/Army Evaluation Center (ATEC/ AEC) mission, and for the Research and Development and analysis communities. Products result from investigating, analyzing, assessing, experimenting and reporting on the survivability of Soldiers, and on the survivability, lethality and vulnerability (SLV) of the highest-priority Army and threat systems. Products are leveraged within the Army Futures Command (AFC), the Cross-Functional Teams (CFTs), and Program Managers / Program Executive Offices (PM/PEO) to exercise constructive design influence over materiel development and to provide credible engineering-level underpinning and input to the Army Analytical Community.

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| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2022 | FY 2023 | FY 2024 |
| <p>Title: Survivability, Lethality, Vulnerability Analyses (SLVA) for Ground, Aviation, Munitions, and Soldier Systems</p> <p>Description: This activity provides integrated multi-domain SLVA for highest priority Ground, Aviation, Munitions, and Soldier Systems.</p> <p>FY 2023 Plans: Conduct essential SVLA on Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, and Soldier Lethality systems and technologies, and on AFC's, AEC's, and DEVCOM's highest priority platform and weapon systems. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, work with materiel developers to constructively influence system design and provide relevant data to Army analytical community for supporting Analyses of Alternatives and other Army studies.</p> <p>FY 2024 Plans: Will develop and advance foundational SLVA capabilities to conduct analyses and assessments of ground, aviation, munitions, and Soldier technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature ground, aviation, munitions, and Soldier technologies and reduce risk.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort</p> | | 16.093 | 16.567 | 17.022 |
| <p>Title: Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) System Survivability Assessments</p> <p>Description: This effort produces assessments of the survivability of C4ISR systems in Electronic Warfare (EW) and cyber threat environments and conducts Electronic Attack (EA) and cyber analyses that reveal critical vulnerabilities in C4ISR systems. It also defines, demonstrates, and recommends mitigation options to proponents and evaluators of C4ISR. A cyber vulnerability database is maintained for the benefit of the community.</p> <p>FY 2023 Plans: Conduct essential cyber and EW analysis on network components and technologies as specified by the Network C3I CFT, AFC, AEC, and on DEVCOM's highest priority Network/C3 and other systems. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, work with materiel developers to constructively influence system design and provide relevant data to Army analytical community to support Analyses</p> | | 17.429 | 17.927 | 18.235 |

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| B. Accomplishments/Planned Programs (\$ in Millions) | | FY 2022 | FY 2023 | FY 2024 |
| <p>of Alternatives and other Army studies. Cyber support includes resiliency assessments of systems and Soldiers together and verification of fixes to identified vulnerabilities.</p> <p>FY 2024 Plans: Will develop and advance foundational cyber and electronic warfare analytical capabilities to conduct analyses and assessments of C4ISR technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature C4ISR technologies and reduce risk.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort</p> | | | | |
| <p>Title: Survivability, Lethality, Vulnerability (SLV) Analyses for Developmental Air and Missile Defense Systems</p> <p>Description: Conduct integrated SLV analyses for developmental air and missile defense systems, pre-planned product improvements of current systems, and recently fielded systems.</p> <p>FY 2023 Plans: Conduct high-priority measurements and analysis on AMD systems, technologies and components as specified by AFC, AEC, and DEVCOM. Provide data and analysis support throughout the Project Convergence campaign of learning and Army Futures Command experimentation. For systems supported, work with materiel developers to constructively influence system design and provide relevant data to Army analytical community to support Analyses of Alternatives and other Army studies.</p> <p>FY 2024 Plans: Will develop and advance foundational SLV capabilities to conduct analyses and assessments of developmental air and missile defense technologies as specified by AFC/DEVCOM and AEC highest priority systems. Will provide data and analysis support throughout AFC experimentation, including the Project Convergence Campaign of Learning and the Future Study Program. For DEVCOM Centers/ARL, will work with prototype technology developers to constructively influence design and provide performance data to mature developmental air and missile defense technologies and reduce risk.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding changes reflect planned lifecycle of this effort.</p> | | 1.520 | 2.006 | 2.261 |
| Accomplishments/Planned Programs Subtotals | | 35.042 | 36.500 | 37.518 |
| C. Other Program Funding Summary (\$ in Millions) | | | | |
| N/A | | | | |

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

Remarks

D. Acquisition Strategy

N/A