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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2025 Operational Test and Evaluation, Defense **Date:** March 2024

<b>Appropriation/Budget Activity</b> 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605814OTE / <i>Operational Test Activities and Analyses</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	180.781	144.590	58.693	102.922	-	102.922	117.130	139.663	165.236	168.541	Continuing	Continuing
000920: <i>OTA&amp;A</i>	180.781	144.590	58.693	102.922	-	102.922	117.130	139.663	165.236	168.541	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight functions, as well as updates to T&E policy and directives to the Department of Defense (DOD). OTA&A programs focus on broad scopes of the weapons systems integration to joint-warfighting and national defense agencies environment; policy, and strategy updates; evolving T&E methodology changes; and data-based integration efforts to align with the DOD acquisition community’s digital transition. The OTA&A programs consist of four activities: Joint Test and Evaluation (JT&E); Test and Evaluation Threat Resource Activity (TETRA); Center for Countermeasures (CCM); and Strategic Initiatives, Policy, and Emerging Technology (SIPET).

JT&E projects are T&E activities conducted in a joint military environment that develop process improvements. These multi-Service projects, chartered by the Office of the Secretary of Defense and coordinated with the Joint Staff, CCMDs, and the Services, provide non-materiel solutions that improve the following: joint interoperability of Service systems, technical and operational concepts, joint operational issues, development and validation of joint test methodologies, and test data for validating models, simulations, and test beds. New projects are also encouraged to align their efforts to support the National Defense Strategy (NDS). The JT&E projects address relevant joint warfighting issues in a joint test and evaluation environment by developing and providing new tactics, techniques, and procedures to improve joint capabilities and methodologies.

TETRA, based on a memorandum of agreement between the DOT&E and the Defense Intelligence Agency, provides DOT&E support in the areas of threat resource analysis, intelligence support and threat systems investments. As DOT&E’s agent, TETRA provides threat resource analyses on the availability, capabilities and limitations of threat representations (threat simulators, targets, models, U.S. surrogates, and foreign materiel) and analysis of test resources used for operational testing to support DOT&E’s assessment of the adequacy of testing for those programs designated for oversight by DOT&E and the Office of the Under Secretary of Defense Acquisition and Sustainment. TETRA provides DOT&E action officers and other DOT&E activities with program-specific threat intelligence support. TETRA also funds management, oversight, and the actual development of common-use threat specifications for threat simulators, threat representative targets, and digital threat models used for T&E.

CCM, a Joint Service Countermeasure (CM) T&E activity, directs, coordinates, supports, and conducts independent CM/counter-CM T&E activities of U.S. and foreign weapon systems, subsystems, sensors, and related components. CCM accomplishes this work in support of DOT&E, weapon system developers, and the Services.

CCM’s testing and analyses directly supports evaluations of the operational effectiveness and suitability of CM/counter-CM systems, such as aircraft survivability equipment (ASE) used on rotary-wing and fixed-wing aircraft. CCM’s support of the T&E of ASE enables the survivability of aircraft in a high threat environment to enable mission success. In addition, CCM provides test support for directed energy weapons (DEW) and counter-unmanned aircraft systems (C-UAS) programs. CCM improves Service member exercises, training, and pre-deployment activities with expertise in CM/counter-CM technology and capabilities. CCM deployed specialized

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Operational Test and Evaluation, Defense	<b>Date:</b> March 2024
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instrumentation to collect threat weapon data for threat model development in support of M&S evaluation efforts. Also, cooperative allied efforts are supported in the areas of ASE T&E, DEW T&E, and threat M&S development.

This Program element also consists of SIPET, initiated in 2021 to codify and implement strategy and policy to keep pace with science and technology to modernize T&E tools, processes, infrastructure, and workforce. The core of the SIPET mission is to drive continuous innovation to meet the T&E demands of the future using five strategic pillars:

- Pillar 1: Test the way we fight
- Pillar 2: Accelerate the delivery of weapons that work
- Pillar 3: Improve the survivability of DoD in a contested environment
- Pillar 4: Pioneer T&E of weapon systems built to change over time
- Pillar 5: Foster an agile and enduring T&E Enterprise Workforce.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	56.690	58.693	59.477	-	59.477
Current President's Budget	144.590	58.693	102.922	-	102.922
Total Adjustments	87.900	0.000	43.445	-	43.445
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	87.900	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Transfer in: Funding from R-1 PE 0605118OTE to 0605814OTE	-	-	43.445	-	43.445

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 000920: *OTA&A*

- Congressional Add: *Program Increase: Test Capabilities Acceleration - Directed Energy*
- Congressional Add: *Program Increase: Test Capabilities Acceleration - Space Systems*
- Congressional Add: *Program Increase: Test Capabilities Acceleration - Targets*
- Congressional Add: *Program Increase: Test Capabilities Acceleration - Data Management*
- Congressional Add: *Program Increase: Test Capabilities Acceleration - Artificial Intelligence*

	<b>FY 2023</b>	<b>FY 2024</b>
	7.500	-
	7.500	-
	25.000	-
	16.400	-
	17.500	-

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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2023	FY 2024
Congressional Add: <i>Program Increase: Test Capabilities Acceleration - AI/Autonomous Systems</i>	6.000	-
Congressional Add: <i>Program Increase: Test Capabilities Acceleration - Innovation Hub</i>	8.000	-
Congressional Add Subtotals for Project: 000920	87.900	-
Congressional Add Totals for all Projects	87.900	-

**Change Summary Explanation**

Transfer of funds from R-1 Program Element 0605118OTE to 0605814OTE (\$43.445M) for the better alignment of resource execution in continuing efforts from prior year Congressional adds in test capability acceleration for areas of direct energy, space systems, targets, artificial intelligence/autonomous systems, and data management innovations.

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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
000920: <i>OTA&amp;A</i>	180.781	144.590	58.693	102.922	-	102.922	117.130	139.663	165.236	168.541	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

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instrumentation to collect threat weapon data for threat model development in support of M&S evaluation efforts. Also, cooperative allied efforts are supported in the areas of ASE T&E, DEW T&E, and threat M&S development.

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 Pillar 4: Pioneer T&E of weapon systems built to change over time  
 Pillar 5: Foster an agile and enduring T&E Enterprise Workforce.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Title:</b> Operational Test Activities and Analyses (OTA&amp;A)</p> <p><b>Description:</b> OTA&amp;A programs are continuing efforts that provide management and oversight functions, as well as updates to T&amp;E policy and directives to the Department of Defense (DoD). OTA&amp;A programs focus on broad scopes of the weapons systems integration to joint-warfighting and national defense agencies environment; policy, and strategy updates; evolving T&amp;E methodology changes; and data-based integration efforts to align with the DoD acquisition community’s digital transition. The OTA&amp;A programs consist of four activities: JT&amp;E, TETRA, CCM, and SIPET.</p> <p><b>FY 2024 Plans:</b>                      JT&amp;E                      In FY 2024, JT&amp;E continues two new Joint Feasibility Study projects of which one will be selected to conduct a new Joint Test project. JT&amp;E also is working five new Quick Reaction Test projects, including the following three projects chartered in the first selection cycle:</p> <ol style="list-style-type: none"> <li>1. Civil Data Link Cyber Awareness and Resiliency Quick Reaction Test to develop and validate TTP to detect, respond, and recover from resiliency issues with Aircraft Communication, Addressing, and Reporting System via non-materiel mitigations to ensure mission assurance.</li> <li>2. Joint Contaminated Human Remains Storage and Temporary Interment/Disinterment Quick Reaction Test to provide joint warfighter tactics, techniques, and procedures (TTP) to identify storage recommendations for JCHR prior to evacuation or temporary interment; provide successful preliminary identification for remains that cannot be repatriated expeditiously during</li> </ol>	56.690	58.693	102.922

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>large-scale combat operations; provide accountability for remains at the temporary interment site; and identify safety concerns for personnel executing the tasks.</p> <p>3. Nuclear Command, Control, and Communications Risk Assessment Quick Reaction Test to develop a holistic multi-domain focused process with associated indications, warnings, and triggers to improve nuclear command, control, and communications decision-making.</p> <p>Two Joint Test and two Quick Reaction Test projects from FY 2023 continue evaluation in FY 2024:</p> <p>1. Joint Continental United States Director Over-the-Horizon Radar Joint Test to develop, test, and evaluate operational and tactical level TTP that integrates maneuver and electronic warfare capabilities to support joint forces in mitigating adversary anti-access/area denial strategies and capabilities to maintain freedom of maneuver in air and maritime operational domain areas.</p> <p>2. Joint Convention Nuclear Integration Joint Test develops and operationally tests and evaluates a CONOPS to define major mission functions for various strategic scenarios for use by the responsible organizations.</p> <p>3. Automated Tactical Targeting and Counterfire Kill Web System Quick Reaction Test develops and validates TTP to optimize the automation provided by ATTACKS to support the Counter-Fire Task Force mission, including Tactical Air Control Party operators and Air Battle Managers to maximize operational efficiency and effectiveness.</p> <p>4. Joint Interface Control Cell Resiliency Quick Reaction Test develops TTP that combats adversarial cyber interference and enhances the ability of Joint Interface Control Officers to better detect, respond, and recover from cyber interference in the tactical data links networks.</p> <p>JT&amp;E will close five Quick Reaction Test projects:</p> <p>1. Commander's Concepts (CONOPS) for Novel Information Warfare Capabilities Quick Reaction Test to refine, test, and validate a joint CONOPS to support logistics and authorities for a new non-kinetic capability executed by U.S. Strategic Command assigned assets.</p> <p>2. Joint Aviation Signature Management Analysis, Application, and Rehearsals Tool Quick Reaction Test develops TTP to measure electromagnetic signatures of low level, joint tactical aircraft to produce a series of models that will be used to increase aviation combat survivability through a reduction in aircraft susceptibility in multi-domain operations.</p>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>3. Joint Distributed Command and Control Quick Reaction Test develops, tests, and evaluates a CONOPS that provides a distributed, resilient, and flexible Joint Distributed Nuclear Command and Control capability with future resources and technology.</p> <p>4. Joint-Global Hypersonic Operational Sensor Tracking Quick Reaction Test develops, tests, and delivers a validated CONOPS and associated TTP to rapidly task external sensors and internal missile defense sensors in real-time during advanced trans-regional threat events.</p> <p>5. Joint Operation NOBLE EAGLE Link-16 Tactical Data Link Quick Reaction addresses TTP for Rotary Wing Air Intercept missions flown in conjunction with Air Force and Navy aircraft and Ground Based Air Defenses controlled by the Eastern and Western Air Defense Sectors in the Continental North American Aerospace Defense Command Region.</p> <p>TETRA In FY 2024, TETRA continues to test planning/working group participation and perform technical analyses to identify threat shortfalls; align with the NDS requirements and; conducts special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions. TETRA will:</p> <ul style="list-style-type: none"> <li>- Continue to create standard operating procedures for DOT&amp;E Action Officer intelligence support to reduce risk and capability.</li> <li>- Execute and deliver eight DoD/DOT&amp;E/IC academic and applied science articles on use, development, testing, and return on investment for Artificial Intelligence (AI), Superteaming, AI team augmentation and T&amp;E of AI.</li> <li>- Execute initiatives that directly influence or improve the areas of software intensive systems and cybersecurity by moving to digital engineering via accredited models and simulation while continuing to “Shift Left” with integrated developmental and operational testing. TETRA plans to improve the test environments of growing importance on Human-System Interaction and adapting T&amp;E for emergent technologies.</li> <li>- Execute initiatives to understand and develop test capability for emerging technologies, T&amp;E infrastructure, tools, and processes for emerging capabilities and threats (space, hypersonics, directed energy, AI, ML, infrared and radio frequency, 5th Generation Aerial Target (5GAT), automated &amp; autonomous cybersecurity testing, and neural networks to address current and potential threats.)</li> <li>- Continue to support the reduction in acquisition and test timelines while increasing test capabilities against Great Power threats.</li> </ul>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<ul style="list-style-type: none"> <li>- Continue to foster rapid technological advancements in the areas of threat representation for T&amp;E and threat test resources by incorporating innovative technologies from the intelligence community into threat test assets to provide improved test fidelity and performance with cost savings.</li> <li>- Continue identifying initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems and scalable cyberspace threat test environments that can interface with cyber test networks; and to conduct offensive and defensive cyberspace operations without significantly impacting critical operational capabilities.</li> <li>- Continue to develop and build threat representative decoys and shells to support tests conducted on the ranges.</li> <li>- Support initiatives based on the cognitive radar definition results of the white paper study to develop models for testing against advanced cognitive radar threats.</li> <li>- Continue to pursue initiatives for improving satellite and space threat representations and developing alternatives for conducting threat realistic operational testing in response to environmental limitations.</li> <li>- Continue to support the US warfighter by providing threat intelligence relevant to emerging threats such as artificial intelligence, autonomy, robotics, directed energy, hypersonic and biotechnology to ensure operational and developmental testing occurs against realistic threat representations, including (but not limited to) threats from both revisionist powers such as China and Russia threats from rogue regimes such as North Korea and Iran, and threats from non-state actors.</li> <li>- Continue to conduct threat intelligence investigations that support use of innovative technologies in the areas of artificial intelligence, autonomy, robotics, machine learning, quantum computing, lasers, nanotechnology, chemical and biological, directed energy, hypersonic and biotechnology being developed by nation states to improve threat representation in the contested domain of air, land, sea, space and cyberspace.</li> <li>- Continue to support initiatives for the development of Great Power threat representative jammers, for use in terrain constricted tests as a directional active electronically steered array jammer that will limit Federal Aviation Administration and other common jammer restrictions/acceptance/endorsement for T&amp;E use.</li> <li>- Continue to sustain and manage threat M&amp;S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&amp;E facilities and distributing performance and signature models to T&amp;E users.</li> </ul>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<ul style="list-style-type: none"> <li>- Continue to represent DOT&amp;E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&amp;E needs for foreign materiel, coordinate service requirements, and de-conflict and prioritize foreign materiel requirements for T&amp;E.</li> <li>- Continue to provide intelligence support to DOT&amp;E staff to address specific questions on threat systems affecting programs on the OSD T&amp;E Oversight list and provide briefings and special intelligence reports when necessary.</li> <li>- Continue to provide DOT&amp;E representation at the Threat Steering Group (TSG) in support of the Validated Online Lifecycle Threat (VOLT) Report process.</li> <li>- Continue to represent DOT&amp;E interests on the Infrastructure Assurance Analysis Working Group and the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition.</li> <li>- Continue to serve DOT&amp;E's interests on the ESG and provide access to the Incident Management, Analysis and Reporting System (IMARS).</li> <li>- Continue to manage Information Technology Enterprise Architecture Management System (ITEAMS) efforts supporting programs on the OSD Oversight T&amp;E List by conducting intelligence "deep dives" to produce intelligence in sufficient detail to develop new threat test assets/threat systems for T&amp;E.</li> <li>- Continue the independent review of validation reports to ensure the correct threat data and critical parameters are presented in the reports to assess the threat representations' capabilities to replicate a real-world threat system.</li> <li>- Continue to provide threat intelligence and validation support at the JASP reviews to ensure there is no duplication of effort and independently ensure the correct threat data and critical parameters are presented to assess the real-world threat representations.</li> <li>- Continue serving as the T&amp;E Regional Infrastructure Working Group (RIWG) DOT&amp;E lead for targets and threat systems investments.</li> <li>- Continue serving as the DOT&amp;E agent for oversight in the coordination, development and execution of all Test Resource Management Center (TRMC) funded projects within RIWG's Strategic &amp; Foundational Portfolios and legacy project investments; review Threat Systems investments to prevent any duplication of effort and encourage cost savings by the sharing or multi-service use of newly developed threat representations to T&amp;E.</li> </ul>			

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>- Continue to lead Allied/NATO initiatives, tests, intelligence, and modeling &amp; simulation collaborative capability.</p> <p>- Provide threat resource analyses on the availability, capabilities and limitations of threat representations in electronic warfare to develop threat models and various emitters.</p> <p>TETRA continues its efforts to significantly improve the standards set of threat performance models as the global threat environment evolves. These activities help DOT&amp;E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is threat realistic and suitable, promotes common solutions to Service threat representation needs and ultimately supports the warfighter.</p> <p>CCM CCM will emphasize support of the DOT&amp;E enterprise, with a clear focus on Title 10 oversight programs, ASE, DEW, C-UAS, and warfighter training events. CCM expects to increase focus on additional DoD critical technology areas that may have T&amp;E gaps, which will contribute to the testing of future weapons and the understanding of emerging threats. CCM is supporting the DOT&amp;E Space Electronic Warfare (EW) and Cyber Working Group to identify test resource gaps. CCM's ability to provide unique test equipment and expertise will remain a benefit to all Services, and the ongoing Improvement and Modernization plans will ensure test capabilities are provided at a cost savings across the DoD. Additional instrumentation, personnel, and training will be key to ensuring our ongoing test support continues to add significance in emerging technology areas.</p> <p>CCM is contributing to the execution of the DOT&amp;E Strategy Implementation Plan to support credible evaluation of the future joint force. CCM will build critical test and evaluation capabilities and the workforce necessary to evaluate emerging warfighting technologies. This includes mobile, open-air data collection and analysis capabilities that will support the T&amp;E of the rapid prototyping and fielding needs of these systems. The mobile test capability will allow T&amp;E of operational representative test scenarios in an open-air environment to support the accelerated development and fielding of CM systems within the DoD.</p> <p>SIPET SIPET plans to define the capability needs of the future based on known trends, capability gaps, and future needs in a document that capture all domain T&amp;E, Joint T&amp;E, and test range requirements. SIPET will produce and foster a methodology to continue to capture these requirements over time. Also included in this work is a design concept for a data-backed, all-domain Modeling and Simulation (M&amp;S) environment to integrate with live, multi-domain operational testing using Models-Based Systems Engineering (MBSE) to align with the DoD acquisition community's digital transition.</p>			

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>SIPET plans to use the 2020 DoD Data Strategy to implement data standards, data stores, knowledge management tools, and automated data fusion/analytic tools to expedite data collection, data analysis and reporting of T&amp;E outcomes of DoD systems and services. This work will re-envision the T&amp;E planning and analysis with increased AI and automation tools to support the T&amp;E community. Key to this work is an approach codifies how system behavior can be inferred from a collection of T&amp;E evidence that supports efficient decision-making processes. We will address well known T&amp;E challenges that have plagued the community like determining test adequacy for any phase of test along with determining and how to T&amp;E systems that mature over time (or acquisition milestones).</p> <p>SIPET plans to enable the test and evaluation community to address survivability-related challenges, and the importance of evaluating synergistic kinetic as well as non-kinetic effects. This work will standardize and automate mission-based assessments that allow for: adequate and efficient characterization of system designs, identification &amp; prioritization of vulnerabilities, identification of potential attack conditions, and evaluations of threat effects on the mission. SIPET will deliver a Full Spectrum Survivability Tool (FSST) set capable of predicting vulnerabilities and their mission effects when facing kinetic and non-kinetic threats, and a responsive threat infrastructure that will enable dynamic updates as threats continue to evolve. This will improve processes and key measures that focus the T&amp;E design on mission and risk based anticipated limitations to adequately evaluate mission-level vulnerabilities to full spectrum threats.</p> <p>SIPET plans to innovate and integrate T&amp;E within and across three key areas: 1) Digital Twins, 2) Artificial Intelligence (AI), and 3) Software-Related Technologies. SIPET will develop and standardize an architecture for calibrating and accrediting models based on real, operational data. SIPET will use AI and Machine Learning (ML) use cases to write requirements and policy to address current gaps in operational T&amp;E performance. SIPET will design software, information assurance, and cybersecurity requirements for software pipelines and factories.</p> <p>SIPET will rework its Workforce Competency Model to account for changing job demands in response to a continuously changing and dynamic operating environment. SIPET will partner will DAU develop an overall DoD T&amp;E competency model to facilitate a T&amp;E Enterprise Mindset.</p> <p><b>FY 2025 Plans:</b> JT&amp;E In FY 2025, JT&amp;E plans to start two new Joint Feasibility Study projects, one new Joint Test project, and five new Quick Reaction Test projects. JT&amp;E plans to close the two Joint Test projects that started in FY 2023 and the five Quick Reaction Test projects that started in FY 2024. One Joint Test project initiated in FY 2024 will continue through FY 2025.</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Operational Test and Evaluation, Defense		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 0460 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	<b>Project (Number/Name)</b> 000920 / OTA&A

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

	FY 2023	FY 2024	FY 2025
<p><b>TETRA</b> In FY 2025, TETRA plans to continue all the prior actions identified in FY 2024 while providing new support tailored to specific U.S. weapon systems acquisitions based on the availability of funding. TETRA will:</p> <ul style="list-style-type: none"> <li>- Continue to conduct threat intelligence analysis of foreign Integrated Air Defense Systems (IADS) and threat weapons kill-web capabilities to address increased threat weapons networking capabilities and enable improved documentation in TEMPS &amp; Validated Online Lifecycle Threat (VOLT) Reports to improve testing of U.S. capabilities in a threat-representative, integrated kill-web environment.</li> <li>- Support the Space Electronic Warfare and Cyber Warfare definition roadmap initiative to begin developing the models and processes required to test jammers employing artificial intelligence techniques in a threat representative environment.</li> <li>- Develop the first AI Superteam for DOT&amp;E and test community.</li> <li>- Provide threat resource analyses on the availability, capabilities, and limitations of threat representations in electronic warfare to develop threat models and various emitters.</li> <li>- Continue to support DOT&amp;E's I-Plan, Strategy, and execution of Pillars 1-5 required to develop and sustain tools, methods, processes, and the workforce needed to support credible evaluation of the future Joint Force.</li> </ul> <p>Threat Systems will continue its efforts to significantly improve the standards set of threat performance models in a dynamic environment as the global threat environment evolves. These activities help DOT&amp;E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is threat realistic and suitable, promotes common solutions to Service threat representation needs, and ultimately supports the warfighter.</p> <p><b>CCM</b> In FY 2025, while continuing to support the T&amp;E of ASE, DEW, C-UAS, and warfighter training events, CCM will evaluate its current capabilities and test instrumentation gaps in high priority technology areas for possible solutions to support future T&amp;E modernization. CCM will continue to work with the DOT&amp;E Strategy Implementation Plan and the Test Resource Management Center to identify test capability gaps and propose solutions.</p> <p><b>SIPET</b> SIPET will expand on its Pathfinders Program for Workforce Recruitment and Retention to establish new experiential learning opportunities to access and build required expertise by increasing scholarship opportunities within the T&amp;E community.</p>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Operational Test and Evaluation, Defense		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 0460 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	<b>Project (Number/Name)</b> 000920 / OTA&A

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Specifically this work will address the current unmet demand for qualified, certified cyber talent to support the government's ability to cope with future threats and opportunities in cyber, software, and AI by generating a steady flow of experienced cyber talent that can be found in academia.			
SIPET plans to develop space environment/system modeling and analytic tools that provide validated threat emulators and calibrated response models that accurately characterize and represent contested space for test and training and identify space test infrastructure to support testing space systems or subsystems ground-testing for under certified adversarial threats and combined effects at scale			
SIPET plans to implement, form, and manage a tester-warfighter innovation (TWI) partnership charter and multidisciplinary action teams comprised of experts from within the government and across industry, academia, federally funded research and development centers, university affiliated research centers, and international partners to modernize assessments of software intensive and cyber physical systems and conduct the following activities related to test, training, and mission planning: characterize the current state; identify and prioritize gaps and develop innovative solutions to advance the current state towards the identified, desired end-state; support accelerated implementation of solutions; and measure improvements.			
<b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> The increase in funding will support the tester and warfighter innovation partnerships that will bridge the gap from acquisition to fielding by determining how to enable proper system characterization and readiness. This work will foster tester and warfighter collaboration at the earliest stages of T&E highlighting the planning execution and reporting of T&E activities that support the joint warfighter concept.			
<b>Accomplishments/Planned Programs Subtotals</b>	56.690	58.693	102.922

	<b>FY 2023</b>	<b>FY 2024</b>
<b><i>Congressional Add:</i></b> Program Increase: Test Capabilities Acceleration - Directed Energy	7.500	-
<b><i>FY 2023 Accomplishments:</i></b> Congressional add funding provided to increase the capability of the M&S tools by including additional, operationally relevant adversary EMS targets and by adding rotorcraft systems. DOT&E is providing feedback on a hardware in the loop facility to increase the fidelity of the threat representation in the M&S tool. DOT&E plans to deliver a capability of testing live fire cyber effects delivered through EMS channels, while developing a method and deliver data to support evaluation of a DOD mission thread in a contested EMS environment. DOT&E has initiated an effort to develop agile threat representation to keep pace with near-peer threats.		
<b><i>Congressional Add:</i></b> Program Increase: Test Capabilities Acceleration - Space Systems	7.500	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Operational Test and Evaluation, Defense		<b>Date:</b> March 2024	
<b>Appropriation/Budget Activity</b> 0460 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	<b>Project (Number/Name)</b> 000920 / OTA&A	
		<b>FY 2023</b>	<b>FY 2024</b>
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to reduce the uncertainty in the M&S tools by generating and creating data management repositories for test data to support the validation and accreditation of high-fidelity and fast-paced M&S tools for use in T&E. DOT&E is partnering with industry in efforts to provide the capability to collect T&E data in over the ocean testing.			
<b>Congressional Add:</b> Program Increase: Test Capabilities Acceleration - Targets		25.000	-
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to identify the next phase of threat specific and threat capable target modeling capabilities required to represent the multi-domain joint operational environment. DOT&E continues to work with industry and partners to enhance the capability to develop digital representations (twins) of threats capable of processing waveform and jamming, while developing electronic protection algorithms. DOT&E initiated new hardware in the loop capability to emulate the adversary Integrated Air Defense System and development of space threat representative models.			
<b>Congressional Add:</b> Program Increase: Test Capabilities Acceleration - Data Management		16.400	-
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to enhance documentation of data management needs across the enterprise while initiating the development of common secure enterprise distributed data and analysis environment integrated with modeling & simulation. DOT&E seeks to enhance efficiency and accuracy of data analysis by using automated technology and integration of range capability and target vulnerability data into the Advana platforms for enhanced data analytic capabilities.			
<b>Congressional Add:</b> Program Increase: Test Capabilities Acceleration - Artificial Intelligence		17.500	-
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to test capabilities acceleration for the technology and infrastructure development, as well as T&E methods, tools, and processes to support artificially intelligent-reliant cognitive electronic warfare systems models development.			
<b>Congressional Add:</b> Program Increase: Test Capabilities Acceleration - AI/Autonomous Systems		6.000	-
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to test capabilities acceleration for the technology and infrastructure development, as well as T&E methods, tools, and processes to support AI/autonomous systems T&E.			
<b>Congressional Add:</b> Program Increase: Test Capabilities Acceleration - Innovation Hub		8.000	-
<b>FY 2023 Accomplishments:</b> Congressional add funding provided to accelerate our FY22 Strategy Plan which will address software- and cyber-related T&E challenges by increasing the cyber survivability posture, effectiveness, suitability, and survivability of software-reliant systems. DOT&E seeks to improve access to talent through internships, faculty, and scholarships; while creating and providing centralized access to on-call			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2025 Operational Test and Evaluation, Defense **Date:** March 2024

<b>Appropriation/Budget Activity</b> 0460 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	<b>Project (Number/Name)</b> 000920 / OTA&A
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	<b>FY 2023</b>	<b>FY 2024</b>
software and cyber test and evaluation expertise; and enhanced software and cyber test and evaluation training opportunities.		
<b>Congressional Adds Subtotals</b>	87.900	-

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A