Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Operational Test and Evaluation, Defense	Date: March 2024
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*

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	177.597	167.953	103.252	109.561	-	109.561	109.183	107.744	110.152	112.621	Continuing	Continuing
000311: *LFT&E*	177.597	167.953	103.252	109.561	-	109.561	109.183	107.744	110.152	112.621	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Joint Live Fire (JLF), Joint Aircraft Survivability Program (JASP), and Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of LFT&E. The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual U.S. and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element supports the DoD's JLF Program, initiated in 1984 under an Office of the Secretary of Defense charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability. Through its evolution, the JLF program also facilitates the development of adequate LFT&E tools, methods, and infrastructure required for credible development of both, Joint Munitions Effectiveness Manuals (JMEM) weaponeering tools and LFT&E programs.

JASP is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the Commander of the U.S. Navy Naval Air Systems Command, the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Commander of the U.S. Air Force Life Cycle Management Center to increase the affordability, readiness, and effectiveness of tri-Service aircraft through joint coordination and development of survivability technologies, design tools, and assessment methodologies. The JASP coordinates and conducts RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability M&S, facilitate information exchange on aircraft survivability, and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group, which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT).

JTCG/ME was chartered to serve as DoD's focal point for munitions effectiveness information. The JTCG/ME produces Joint Munitions Effectiveness Manuals (JMEMs) that are the sole source for all joint Service authenticated non-nuclear weapons effectiveness data and methodology for the DoD. The JMEMs are the "how to" manuals for putting ordnance on target and as such, directly impacts combat readiness, effectiveness, and survivability. JMEMs are used by the warfighters in operational weaponeering and collateral damage estimation (CDE) calls in direct support of operations, mission planning, and training; by the DoD, joint, and Service planners in force-on-force M&S, mission area analysis, requirements studies, and weapon procurement planning; and by the Service acquisition community in performance

assessment, analysis of alternatives, and survivability enhancement studies. The JTCG/ME continually evolves weapons effectiveness and target vulnerability data, standards, methodologies, and processes based on the strategic environment for better munitions effectiveness evaluation and support to a more lethal force. JTCG/ME also increases efficiency by leveraging ongoing DoD efforts and supporting the DoD's intent to complement U.S. interest and capabilities by providing weaponeering and targeting capability to coalition partners.

The JMEM requirements and development processes are driven by operational lessons learned (e.g., Inherent Resolve, Resolute Support, and Freedom Sentinel); Joint Staff data calls, and the needs of combatant commands (CCMDs), the Services, the Military Targeting Committee (MTC) guided by Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5140.01, Munitions Requirements Process - DoD Instruction 3000.04 and Operational Users Working Groups (OUWGs) input for specific weapon-target pairings and methodologies. Considerable effort goes into these user forums to establish warfighter requirements for current and future JTCG/ME products, as well as continued training events and day-to-day support - all with the goal of enabling greater force lethality, strengthened partner capabilities, and optimal use of resources.

This Program Element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described LFT&E tasks, as well as travel funds to carry out the JLF, JASP, and JTCG/ME programs.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	98.753	103.252	107.037	-	107.037
Current President's Budget	167.953	103.252	109.561	-	109.561
Total Adjustments	69.200	0.000	2.524	-	2.524
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	69.200	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Transfer in: Funding from R-1 PE 0605118OTE to 0605131OTE	-	-	2.524	-	2.524

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 000311: *LFT&E*		
Congressional Add: *Program Increase: Test Capabilities Acceleration - Electromagnetic Spectrum*	41.000	-
Congressional Add: *Program Increase: Test Capabilities Acceleration - Hypersonics*	10.000	-
Congressional Add: *Program Increase: Test Capabilities Acceleration - Space Systems*	15.000	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Operational Test and Evaluation, Defense	Date: March 2024
Appropriation/Budget Activity 0460: *Operational Test and Evaluation, Defense I* BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605131OTE *I Live Fire Test and Evaluation (LFT&E)*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Congressional Add: *Program Increase: Test Capabilities Acceleration - Data Management*	3.200	-
Congressional Add Subtotals for Project: 000311	69.200	-
Congressional Add Totals for all Projects	69.200	-

Change Summary Explanation

Transfer of funds from R-1 Program Element 0605118OTE to 0605131OTE ($2.524M) for the better alignment of resource execution, and continuing efforts from prior year Congressional adds in test capability acceleration for areas of electromagnetic spectrum, hypersonic, space systems, and data management innovations.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense			Date: March 2024
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	Project (Number/Name) 000311 / *LFT&E*	

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
000311: *LFT&E*	177.597	167.953	103.252	109.561	-	109.561	109.183	107.744	110.152	112.621	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Joint Live Fire (JLF), Joint Aircraft Survivability Program (JASP), and Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of LFT&E. The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual U.S. and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element supports the DoD's JLF Program, initiated in 1984 under an Office of the Secretary of Defense charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability. Through its evolution, the JLF program also facilitates the development of adequate LFT&E tools, methods, and infrastructure required for credible development of both, Joint Munitions Effectiveness Manuals (JMEM) weaponeering tools and LFT&E programs.

JASP is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the Commander of the U.S. Navy Naval Air Systems Command, the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), and the Commander of the U.S. Air Force Life Cycle Management Center to increase the affordability, readiness, and effectiveness of tri-Service aircraft through joint coordination and development of survivability technologies, design tools, and assessment methodologies. The JASP coordinates and conducts RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability M&S, facilitate information exchange on aircraft survivability, and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group, which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT).

JTCG/ME was chartered to serve as DoD's focal point for munitions effectiveness information. The JTCG/ME produces Joint Munitions Effectiveness Manuals (JMEMs) that are the sole source for all joint Service authenticated non-nuclear weapons effectiveness data and methodology for the DoD. The JMEMs are the "how to" manuals for putting ordnance on target and as such, directly impacts combat readiness, effectiveness, and survivability. JMEMs are used by the warfighters in operational weaponeering and collateral damage estimation (CDE) calls in direct support of operations, mission planning, and training; by the DoD, joint, and Service planners in force-on-force M&S, mission area analysis, requirements studies, and weapon procurement planning; and by the Service acquisition community in performance

assessment, analysis of alternatives, and survivability enhancement studies. The JTCG/ME continually evolves weapons effectiveness and target vulnerability data, standards, methodologies, and processes based on the strategic environment for better munitions effectiveness evaluation and support to a more lethal force. JTCG/ME also increases efficiency by leveraging ongoing DoD efforts and supporting the DoD's intent to complement U.S. interest and capabilities by providing weaponeering and targeting capability to coalition partners.

The JMEM requirements and development processes are driven by operational lessons learned (e.g., Inherent Resolve, Resolute Support, and Freedom Sentinel); Joint Staff data calls, and the needs of combatant commands (CCMDs), the Services, the Military Targeting Committee (MTC) guided by Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5140.01, Munitions Requirements Process - DoD Instruction 3000.04 and Operational Users Working Groups (OUWGs) input for specific weapon-target pairings and methodologies. Considerable effort goes into these user forums to establish warfighter requirements for current and future JTCG/ME products, as well as continued training events and day-to-day support - all with the goal of enabling greater force lethality, strengthened partner capabilities, and optimal use of resources.

This Program Element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described LFT&E tasks, as well as travel funds to carry out the JLF, JASP, and JTCG/ME programs.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Live Fire Test and Evaluation	98.753	103.252	109.561
Description: LFT&E of Major DoD Acquisition Programs The FY 2025 request will enable DOT&E to assess the adequacy of LFT&E strategies/plans and generate new LFT&E policies to support systems' acquisitions and rapid fielding. The FY 2025 request will ensure adequate execution of the LFT&E plans and subsequent ability to conduct independent analysis of survivability and lethality tests, and M&S data in support of LFT&E reports to Congress. ***FY 2024 Plans:*** JLF The FY 2024 budget aligns with DOT&E's Science &Technology Strategic Plan/Update, National Defense Strategy (NDS) objectives, and the Secretary of Defense's priorities. It performs a critical role within the Survivability/Lethality Analytic Community by delivering infrastructure, models, simulations, and data to support testing and experimentation of kinetic/non-kinetic systems in operationally relevant contexts to inform, improve and act as a consistent foundation for LFT&E and Warfighter tools and techniques. The FY 2024 program focuses on advancing Survivability/Lethality evaluation through partnering with LFT&E community to advance the state of testing, coordinating with Program Offices to ensure projects contribute to weapons that work, and investing in efficiencies and improvements to save cost and speed delivery of systems. It concentrates on validated munitions effectiveness			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense		Date: March 2024
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 000311 / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
modeling through testing informed by high fidelity codes to push our understanding of developing capabilities that produce verified and validated M&S informing acquisition and warfighter communities with consistent and credible results. Ultimately producing fast running-models based on empirical results, high fidelity modeling and analysis giving Warfighters the timely data their mission requires. Lastly, the program focuses on data initiatives that validate munition and target models supporting digital evaluations of performance, advance evaluation and effectiveness predictions through modern AI/ML techniques and deliver accredited data that forms the foundation of accuracy and credibility. Specifically, the FY 2024 program continues development of validated munitions effectiveness modeling techniques that use high fidelity M&S to inform test events which can be transitioned to fast running models to impact both Acquisition and Warfighter Advanced Target Development in the areas of advanced warhead characterization, aluminized high-explosive modeling, Electronic Warfare GPS denial validations tests, active protection system (APS) modeling, assessment of traumatic brain injuries (TBI), multi-hit kinetic penetration validation, Fast Air Target Encounter Penetration model improvements, and Navy HPM lethality testing. JLF will advance Survivability & Lethality evaluation through developing or contributing to state-of-art test equipment and processes for behind armor debris modernization, full ship shock trial instrumentation improvements, continued advancements in testing requirements for ballistic helmet protection, and increasing fidelity in blast experiments. JLF funds emerging projects that will push the boundaries on development, management, and delivery of effectiveness data for cyber automated threat discovery & vulnerability evaluation reinforcement, effectiveness as a service through probability of kill look ups through Machine Learning (ML) techniques hosted with Application Programming Interfaces, and ML regression on Advanced Joint Effectiveness Model (AJEM) effects data optimized through design-of-experiments. JASP In FY 2024, the JASP continues work on multi-year RDT&E projects and initiates new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will support the NDS objectives to “Defend the Homeland” and “Prevail in Conflict” by developing measures to improve threat situational awareness, defeat adversary advanced radio frequency and infrared guided threats, and provide quantifiable improvements in digital and hardware-in-the-loop M&S capability and credibility. JASP continues to improve aircraft force protection by advancing system hardening against kinetic and non-kinetic threats. JASP will support the NDS objective to ‘Build a Resilient Joint Force’ by funding the development of more efficient capabilities to advance, test and evaluate aircraft survivability against kinetic and non-kinetic threats. The JCAT continues to support the Air Force, Army, Marine Corps, and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense		Date: March 2024
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 000311 / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
DoD science and technology and acquisition communities. The JASP continues supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials, and conducting training for the DoD and their contractors. The JASP initiates, continues, and completes other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E. JTCG/ME JTCG/ME plans to field the Digital Imagery Exploitation Engine (DIEE) v3.0 and support the development of Joint Munitions Effectiveness Manuals (JMEMs) Weaponeering System (JWS) v3.0/DIEE v3.1 capabilities to support Advanced Target Development (ATD) (i.e., Weaponeering, Collateral Damage Effects, Target Coordinate Mensuration) at CCMD level in accordance with Joint Staff Policy. JTCG/ME development events will include Technical Previews (TPs) to finish JWS v3.0/DIEE v3.1 and transition to JWS v3.1/DIEE v3.2 capability development. JTCG/ME enhances its product development/security/operations (DevSecOps) pipelines and cybersecurity processes with refinement/expansion of processes and methods to include consolidated DevSecOps pipelines, improved requirement dashboards, Model Base System Engineering (MBSE), data ontologies, Cooperative Vulnerability and Penetration Assessments (CVPAs), and Adversarial Assessments (AA). These processes will allow flexibility and efficiencies in addressing secure multi-domain targeting strategy and solutions. JTCG/ME develops/accredits Collateral Effects Radii (CER) reference tables for current weapons inventory and in accordance with the latest CJCSI 3160.01, “No-Strike and the Collateral Damage Effects (CDE) Methodology” for air-to-surface and surface-to-surface weapons. JTCG/ME supports/hosts JMEM training sessions, External Interface Working Groups (EIWG), OUWGs, and user help desk. Support ~40+ training sessions with about 400+ students. There is expected increase in training due new JWS v3.1/DIEE v3.1 and J-ACE v6.0 fielding in FY24. JTCG/ME collects user requirements and product use cases, to support JMEM product development. JTCG/ME continues to support/deliver reach back analysis packages for collateral damage mitigation, post-forensic, and force protection analyses packages to operational users for high value targets in current operations. JTCG/ME facilitates coalition interoperability and Information Exchange Agreements (IEA) forums. JTCG/ME continues to support/deliver JWS version releases and standalone Probability of Kill Look Up Tables (PKLUTs) to multiple key coalition partners in support of current operations under Foreign Military Sales (FMS).			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
JTCG/ME enhances "The Bugle" (Program Confluence Board), Joint Effects Library (JEL) and Joint Analysis Repository and Visual Interface System (JARVIS) capabilities that serve as the foundation of product information to users, as well as Tri-service approved methodology and data. JTCG/ME plans to continue to support Enhanced Weaponeering and CDE Program improving weaponeering and CDE methodology. FY24 efforts will continue to foster coordination for gaps and priorities. Data from the multiple tests will be transitioned for enhancing, developing, and validating methodology used in JMEM products and T&E efforts. JTCG/ME continues the multi-year program intended to improved Battle Damage Assessment (BDA) analysis capabilities. FY24 efforts enhances automated data collection, machine learning (ML) algorithms, DIEE/Strike Tracking and Reporting, List Of Reported Damage (STARLORD) front end interface, field/maintain initial Joint Battle Damage Assessment Repository (JBAR) and develop/populate next version. JTCG/ME plans to field/maintain Joint-AntiAir Combat Effectiveness (J-ACE) v6.0.1, which includes multiple training and OUWGs. Develop J-ACE v6.1 leveraging Air Combat Effects Library (ACEL) v2.0 capabilities that include increased data sets and more enhancements for rotary wing, low altitude combat weapons, and high-fidelity Air-to-Air (AAM) modeling capabilities. JTCG/ME continues enhancement of Cyber JMEM capabilities in new versions of Cyber Operations Lethality Effectiveness (COLE) tool and deployment gateway. Efforts also include OUWGs, analyzing/collecting requirements, enhancing user experience, and build/support to user base (i.e., training). JTCG/ME supports fielded Joint Laser Weaponeering System (JLaWS) tool v3.0 and accreditation, as well as develops/fields JLaWS tool v4.0. JLaWS continues to include new weapon systems, target vulnerability characterization, and enhancements from continued test and analytical events. Focus areas include Model Review Committee and increased data reviews/approvals for increased capability on product. JTCG/ME develops initial Joint High-Power Microwave Applied Weaponeering Knowledge Software (JHAWKS) v1.0 to include enhancements from HPM lethality testing, target vulnerability analysis, physics-based modeling, and data collection. JTCG/ME accredits and field Joint Electronic Attach Protection (JEAP) v1.0 capabilities. Develop JEAP tool v2.0 building on JEAP v1.0 capabilities, as well as refined MBSE and ontology models. JEAP version continues to enhance EA effectiveness (offensive jamming) data standards, collect/approve data, enhance capabilities, and multiple OUWGs. The Electronic Attack Advisory Board (which includes CCMD, Service acquisition and operational representatives) leverages for coordination, model/data reviews, and requirements prioritization for the Joint community for JEAP development. JTCG/ME continues to support a multi-year program for the Joint Targeting Intelligence Modernization (JTIM), which enhances the targeting cycle/enterprise and delivery intelligence to warfighters by defining and monitoring the progress to a resilient, secure,			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense		Date: March 2024
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 000311 / *LFT&E*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
and scalable array of enterprise level data, products, and services. Focus areas include: (1) initial development of NEXTGEN DIEE in Cloud/Micro-services environment while maintaining planned and current capabilities to ensure the product meets the needs of the targeting enterprise, (2) establishment/implementation of integrated capability test environment, and (3) affect Civilian Harm Mitigation and Response Access Plan. JTCG/ME continues to support a multi-year program to enhance/develop next generation of maritime weaponeering tools. Focus areas include: (1) data generation/approval to initial capabilities/tools for urgent Weapon/Target Pairings, (2) development of NEXTGEN Engineering Level tools, (3) address target uncertainty, and (4) affect Civilian Harm Mitigation and Response Access Plan. ***FY 2025 Plans:*** JLF The FY 2025 budget will continue to align with DOT&E's Science &Technology Strategic Plan/Update, National Defense Strategy (NDS) objectives, and the Secretary of Defense's priorities. It will perform a critical role within the Survivability/Lethality Analytic Community by delivering infrastructure, models, simulations, and data to support testing and experimentation of kinetic/non-kinetic systems in operationally relevant contexts to inform, improve and act as a consistent foundation for LFT&E and Warfighter tools and techniques. JLF efforts will also resolve survivability- and lethality-related system design challenges of currently fielded U.S. systems while maintaining awareness of LFT&E challenges across all air, ground, and sea domains. Finally, JLF will continue to lead innovation in LFT&E methods to increase LFT&E efficiency and support rapid fielding. JASP In FY 2025, the JASP will work on multi-year RDT&E projects and initiate new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will support the NDS objectives to “Defend the Homeland” and “Prevail in Conflict” by developing measures to improve threat situational awareness, defeat adversary advanced radio frequency and infrared guided threats, and provide quantifiable improvements in digital and hardware-in-the-loop M&S capability and credibility. JASP will improve aircraft force protection by advancing system hardening against kinetic and non-kinetic threats. JASP will support the NDS objective to ‘Build a Resilient Joint Force’ by funding the development of more efficient capabilities to advance, test and evaluate aircraft survivability against kinetic and non-kinetic threats. The JCAT will continue to support the Air Force, Army, Marine Corps, and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal,			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E. JTCG/ME JTCG/ME plans to field JWS v3.0/DIEE v3.1 and support the development of JWS v3.1/DIEE v3.2 capabilities to support ATD (i.e., Weaponeering, CDE, TCM) at CCMD level in accordance with Joint Staff Policy. JTCG/ME development events will include TPs to develop JWS v3.1/DIEE v3.2 and transition to JWSv3.2/DIEE v3.3 capability development. JTCG/ME will maintain/enhance product DevSecOps and cybersecurity processes (e.g., pipelines, dashboards, MBSE, ontologies, cybersecurity testing) to allow flexibility and efficiencies in addressing secure multi-domain targeting solutions. JTCG/ME will develop/accredit CER reference tables for current weapons inventory and in accordance with the latest CJCSI 3160.01, “No-Strike and the CDE Methodology” for air-to-surface and surface-to-surface weapons. JTCG/ME plans to support/host JMEM training sessions, EIWG, OUWGs, and user help desk. Support ~40+ training sessions with about 400+ students. There is expected increase in training due new JWS/DIEE v3.x and J-ACE v6.x fielding in FY23. JTCG/ME will collect user requirements and product use cases, to support JMEM product development. JTCG/ME will support/deliver reach back analysis packages for collateral damage mitigation, post-forensic, and force protection analyses packages to operational users for high value targets in current operations. JTCG/ME will facilitate coalition interoperability and IEA forums. JTCG/ME will continue to support/deliver JWS version releases and standalone PKLUTs to multiple key coalition partners in support of current operations under FMS. JTCG/ME will maintain/enhance “The Bugle” (Program Confluence Board), JEL, and JARVIS capabilities that serve as the foundation of product information to users, as well as Tri-service approved methodology and data. JTCG/ME plans to continue to support Enhanced Weaponeering and CDE Program improving weaponeering and CDE methodology. These efforts will continue to foster coordination for gaps and priorities. Data from the multiple tests will be transitioned for enhancing, developing, and validating methodology used in JMEM products and T&E efforts. JTCG/ME will maintain/support improved BDA analysis capabilities. These efforts will maintain/enhance automated data collection, ML algorithms, DIEE/STARLORD front end interface, and JBAR.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
JTCG/ME plans to support fielded Joint-AntiAir Combat Effectiveness (J-ACE) v6.0.1, which includes multiple training and OUWGs. Develop/field J-ACE v6.1 leveraging ACEL v2.0 capabilities. Initial development of J-ACE v6.2 leveraging ACEL v3.0. J-ACE future versions will include increased data sets and more capabilities (more rotary wing, low altitude combat weapons, and high-fidelity AAM models). JTCG/ME will continue enhancement of Cyber JMEM capabilities in new versions of the COLE tool and deployment gateway experience. Efforts also include OUWGs, analyzing/collecting requirements, enhancing user experience, and support to user base (i.e., training). JTCG/ME will support fielded JLaWS tool v4.0 and accreditation, as well as develop/field JLaWS tool v5.0. JLaWS continues to include new weapon systems, target vulnerability characterization, and enhancements from continued test and analytical events. JTCG/ME will field initial Joint JHAWKS v1.0 and develop v2.0 to include enhancements from HPM lethality testing, target vulnerability analysis, physics-based modeling, and data collection. JTCG/ME will field JEAP tool v2.0, and develop JEAP v3.0 capabilities, as well as refine MBSE and ontology models. JEAP versions will enhance EA effectiveness (offensive jamming) data standards, collect/approve data, enhance capabilities, and multiple OUWGs. EAAB be leveraged for coordination, model/data reviews, and requirements prioritization for the Joint community for JEAP development. JTCG/ME will continue to support a multi-year program for the JTIM, which will enhance the targeting cycle/enterprise and delivery intelligence to warfighters by defining and monitoring the progress to a resilient, secure, and scalable array of enterprise level data, products, and services. JTCG/ME will continue to support a multi-year program to enhance/develop next generation of maritime weaponeering tools. Focus areas include development of NEXTGEN operational tools based on engineering level tools. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase in program funding continues to provide additional support to Joint Targeting Intelligence Modernization (JTIM), which will enhance the targeting cycle/enterprise and delivery intelligence to warfighters by defining and monitoring the progress to a resilient, secure, and scalable array of enterprise level data, products, and services.			
Accomplishments/Planned Programs Subtotals	98.753	103.252	109.561

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense		Date: March 2024
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 000311 / *LFT&E*

	FY 2023	FY 2024
Congressional Add: Program Increase: Test Capabilities Acceleration - Electromagnetic Spectrum ***FY 2023 Accomplishments:*** Congressional add funding provided test capabilities acceleration for the development of radar emulators, testing capabilities in 5G environment, and the modernization of laboratories and digital technologies to include high-fidelity hardware and M&S to support credible evaluation of countermeasures effectiveness.	41.000	-
Congressional Add: Program Increase: Test Capabilities Acceleration - Hypersonics ***FY 2023 Accomplishments:*** Congressional add funding provided test capabilities acceleration for the delivery of several hypersonic test capabilities and continues the development and validation of digital technologies in support of hypersonic operational effectiveness, lethality evaluations, and weaponeering tools. The Hypersonics Add developed focused on five program areas: 1. Improved Test & Evaluation (T&E) Methods – Classified Image Capture with Low, Slow, Small UAS Integrated Defeat System (LIDS), Infrared Optical Fragment Tracking, and Optical Fragment Tracking on Warhead Arena Tests. 2. Understanding effects of weapon deployment modes – effectiveness and collateral damage, Residual-Single Large Mass (r-SLMP) and SLMP M&S and Data Validation, Sub-scale SLMP and r-SLMP with Representative Payloads and Kinetic Crater M&S; Dynamic Blast M&S and Data Validation. 3. Developing new tools and methods to enhance survivability/lethality evaluation of kinetic threats for blast effects - Aluminized high explosive M&S for Enhanced Blast & Metal Acceleration, Improved Fast Running Models for Aluminized Blast and Natural Fragmentation in Hypersonic Flow. 4. Expanding tri-Service model for comprehensive hypersonic lethality capability and Fast Air Target Encounter Penetration (FATEPEN) Laminate Plate Methodology. 5. Ensuring weaponeering methodologies/tools and collateral damage/risk estimates to support emerging hypersonic weapon systems and Terminal Effects/Delivery Accuracy and Data and Methodology Verification and Validation (V&V). The Hypersonics initiative is providing critical test data, methodologies, and tools to enable the determination of SLMP/r-SLMP hypersonic weapons effectiveness and collateral damage estimates for operational users.	10.000	-
Congressional Add: Program Increase: Test Capabilities Acceleration - Space Systems	15.000	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Operational Test and Evaluation, Defense		Date: March 2024
Appropriation/Budget Activity 0460 / 6	**R-1 Program Element (Number/Name)** PE 0605131OTE / *Live Fire Test and Evaluation (LFT&E)*	**Project (Number/Name)** 000311 / *LFT&E*

	FY 2023	FY 2024
FY 2023 Accomplishments: Congressional add funding provided pathfinder test capabilities acceleration to deliver additional accredited space system weaponeering capabilities, collateral damage estimation, and support full spectrum space survivability and lethality in joint multi-domain operations.		
Congressional Add: Program Increase: Test Capabilities Acceleration - Data Management	3.200	-
FY 2023 Accomplishments: Congressional add funding provided test capabilities acceleration in the development and implementation of enterprise-level T&E data management solutions and accelerate the use of digital technologies in T&E. The Data Management Initiative Add developed the JARVIS to store tri-Service developed and approved target vulnerability data; and extended the JARVIS framework to create a service specific target vulnerability data repository. The Data Management initiative established connections between Service developed targets and the JTCG/ME products to enable more targets for the warfighter while facilitating Service data maintenance and control.		
Congressional Adds Subtotals	69.200	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A