Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Office of the Secretary Of Defense	Date: March 2024
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*

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	1,330.170	148.907	75.593	76.639	-	76.639	78.268	79.909	81.589	83.221	-	-
484: *Combating Terrorism Technology Support (CTTS)*	1,330.170	148.907	75.593	76.639	-	76.639	78.268	79.909	81.589	83.221	-	-

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

The Irregular Warfare Technical Support Directorate (IWTSD) conducts rapid research and development in support of the National Defense Strategy (NDS), and the Irregular Warfare Annex, to provide leap-ahead technologies focused on surpassing current and expected levels of technology used and developed by our adversaries, with China as the pacing threat. IWTSD is mandated and structured to rapidly fill capability gaps, to include increasing lethal capability of U.S. forces at the squad and small unit level; developing lethal drones; countering Small Unmanned Aerial Systems (drones); subterranean detection and operations; novel body and vehicle armor; detecting, protecting against, and mitigating novel and wartime CBRNE threats; telematics; covert communications; and of special interest, the use of machine learning and artificial intelligence to enhance the capability of systems used by the military and lessen the workload on the individual users.

During FY 2024 and into FY 2025, IWTSD will continue to focus its R&D activities to rapidly fill the immediate, emerging, and critical capability gaps for those at the tactical edge to include our nations special operations forces, other military operators, intelligence analysts, and first responders.
The number of capability gaps IWTSD is able to address are reduced due to the increased cost of incorporating artificial intelligence, machine learning, cyber hardening, and DoD safety testing of prototype systems prior to OT&E. For instance, the focus on increased lethality has driven up costs to meet Defense safety and testing requirements.
From a broader perspective, projects remain distributed among 10 mission categories:

- Advanced Analytics
- Chemical, Biological, Radiological, Nuclear, and Explosives
- Explosive Ordnance Disposal and Explosive Operations
- Expeditionary Force Protection
- Advanced Development
- Human Performance and Training
- Indirect Influence and Competition
- Protection, Survivability, and Recovery
- Surveillance, Collection, and Operations Support
- Tactical Offensive Support

To accommodate shifting emphasis in mission articulated in the FY 2022 National Defense Strategy, while still operating within budget, IWTSD eliminated the Forensics, Exploitation and Identity Management subgroup and added the Advanced Development subgroup. In order to place greater emphasis on the Congressionally directed

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joint RDT&E programs with Israel, almost 100% of the staff in the Expeditionary Force Protection and the Protection, Survivability, and Recovery subgroups are dedicated to supporting the countering unmanned aerial vehicles and subterranean detection and operations joint RDT&E efforts.

Each of the 10 program subgroups have enduring R&D partnerships with the components of USSOCOM, the Services; and many Defense Agencies. During FY 2023, IWTSD has partnered with USSOCOM, the Services, and Defense agencies to transition or commit to transition over 30 products to a Program of Record, limited procurement, commercialization, or a transition where small numbers of unique prototypes meet special mission requirements. IWTSD's International R&D program has helped other DoD Components and organizations initiate task plans, that support execution of over $20+ million dollars to rapidly develop and prototype new technology and innovation through collaboration and cost sharing with Israel.

While supporting the NDS by filling capability gaps to address our adversaries, with China as the pacing threat, the IWTSD program will continue to identify capabilities to combat terrorism and irregular adversaries and quickly deliver these capabilities to U.S. Defense, interagency, and international partners through rapid research and development, advanced studies, and technical innovation. IWTSD is unique in its approach, annually obtaining joint requirements directly from major Commands, Services, military operators, intelligence analyst, and first responders and discussing those requirements with industry before the requirements are released in a Broad Agency Announcement (BAA).

The FY 2025 Program Requirements Meetings will take place in January, 2024 and contract awards will begin in October or November 2024 (the start of FY 2025).

The IWTSD manages approximately 220 individual projects and international task plans; while also reviewing proposals and negotiating contracts for another 70 requirements for the next fiscal year.

The IWTSD program justified in the R-2 exhibit identifies the projects fully or partially funded by Congressional appropriations for the IWTSD program. However, IWTSD also develops technology and provides support using external funds provided by other DoD and federal departments and international partnerships. These external funds are not reflected in this justification R-2; but the number of activities does reflect positively on the trust and competence that IWTSD has earned throughout the Department of Defense, its international partners, and other Federal organizations to rapidly conduct critical RDT&E and provide innovative products to fill their capability gaps.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	153.114	75.593	76.639	-	76.639
Current President's Budget	148.907	75.593	76.639	-	76.639
Total Adjustments	-4.207	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.207	-			

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 484: *Combating Terrorism Technology Support (CTTS)*		

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Office of the Secretary Of Defense	Date: March 2024
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 3: *Advanced Technology Development (ATD)*	**R-1 Program Element (Number/Name)** PE 0603122D8Z *I Combating Terrorism Technology Support*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Congressional Add: *Combating Terrorism Technology Support (CTTS)*	80.500	-
Congressional Add Subtotals for Project: 484	80.500	-
Congressional Add Totals for all Projects	80.500	-

Change Summary Explanation

No change in FY 2025 from previous PB.

FY 2025 program increase from FY 2024 to address capability gaps between U.S. military forces and peer and near-peer threats.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense											Date: March 2024	
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603122D8Z / *Combating Terrorism Technology Support*				Project (Number/Name) 484 / *Combating Terrorism Technology Support (CTTS)*			
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**
484: *Combating Terrorism Technology Support (CTTS)*	1,330.170	148.907	75.593	76.639	-	76.639	78.268	79.909	81.589	83.221	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

The Irregular Warfare Technical Support Directorate (IWTSD) conducts rapid research and development in support of the National Defense Strategy (NDS), and the Irregular Warfare Annex, to provide leap-ahead technologies focused on surpassing current and expected levels of technology used and developed by our adversaries, with China as the pacing threat. IWTSD is mandated and structured to rapidly fill capability gaps, to include increasing lethal capability of U.S. forces at the squad and small unit level; developing lethal drones; countering Small Unmanned Aerial Systems (drones); subterranean detection and operations; novel body and vehicle armor; detecting, protecting against, and mitigating novel and wartime CBRNE threats; telematics; covert communications; and of special interest, the use of machine learning and artificial intelligence to enhance the capability of systems used by the military and lessen the workload on the individual users.

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• Advanced Development
• Human Performance and Training
• Indirect Influence and Competition
• Protection, Survivability, and Recovery
• Surveillance, Collection, and Operations Support
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joint RDT&E programs with Israel, almost 100% of the staff in the Expeditionary Force Protection and the Protection, Survivability, and Recovery subgroups are dedicated to supporting the countering unmanned aerial vehicles and subterranean detection and operations joint RDT&E efforts.

Each of the 10 program subgroups have enduring R&D partnerships with the components of USSOCOM, the Services; and many Defense Agencies. During FY 2023, IWTSD has partnered with USSOCOM, the Services, and Defense agencies to transition or commit to transition over 30 products to a Program of Record, limited procurement, commercialization, or a transition where small numbers of unique prototypes meet special mission requirements. IWTSD's International R&D program has helped other DoD Components and organizations initiate task plans, that support execution of over $20+ million dollars to rapidly develop and prototype new technology and innovation through collaboration and cost sharing with Israel.

While supporting the NDS by filling capability gaps to address our adversaries, with China as the pacing threat, the IWTSD program will continue to identify capabilities to combat terrorism and irregular adversaries and quickly deliver these capabilities to U.S. Defense, interagency, and international partners through rapid research and development, advanced studies, and technical innovation. IWTSD is unique in its approach, annually obtaining joint requirements directly from major Commands, Services, military operators, intelligence analyst, and first responders and discussing those requirements with industry before the requirements are released in a Broad Agency Announcement (BAA).

The FY 2025 Program Requirements Meetings will take place in January, 2024 and contract awards will begin in October or November 2024 (the start of FY 2025).

The IWTSD manages approximately 220 individual projects and international task plans; while also reviewing proposals and negotiating contracts for another 70 requirements for the next fiscal year.

The IWTSD program justified in the R-2 exhibit identifies the projects fully or partially funded by Congressional appropriations for the IWTSD program. However, IWTSD also develops technology and provides support using external funds provided by other DoD and federal departments and international partnerships. These external funds are not reflected in this justification R-2; but the number of activities does reflect positively on the trust and competence that IWTSD has earned throughout the Department of Defense, its international partners, and other Federal organizations to rapidly conduct critical RDT&E and provide innovative products to fill their capability gaps.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Advanced Analytic Capabilities (AAC)	5.943	7.966	8.572
Description: The Advanced Analytics (AA) Subgroup's objective is to develop and deploy integrated analytic capabilities; enabling Commanders, Warfighters, and Mission Partners to share information and make better/faster decisions at the Strategic, Operational, and Tactical levels. AA projects improve sense-making, decision-making, and data management across a range of mission areas.			
FY 2024 Plans: In FY 2024, the AA Subgroup plans to initiate funding of four (4) projects in areas focused on: 1. Developing our warfighting capabilities with Allies and Partners; 2. Enable capabilities and deepen interoperability; 3. Develop trusted artificial intelligence and autonomy, integrated network system-of-systems, microelectronics, and human-machine interfaces. Examples include, but are not limited to:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense		Date: March 2024
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Develop modeling software to better understand non-linear and non-kinetic impacts of irregular warfare activities following the Correlation of Forces and Means (COFM) framework for kinetic effects and attrition of enemy forces. • Develop an analytical tool that will generate synthetic libraries improving Computed Tomography (CT) and Advanced Imaging Technology (AIT) in screening baggage and passengers. • Develop an analytical tool to improve the detection and geolocation of Unknown RF signals. Currently Adversarial Covert Communications Detection lack the fluidity required across different environments and post-mission reporting and analysis. This requires an enhanced version of the STORM/EWST/MELIAN Electronic Warfare Support System. • Develop an enterprise analytics system to support a deployable 3-D printing capability. The system will enable replication of select parts and special tools that might be required to sustain operations while deployed in forward environments. In FY 2024, the AA Subgroup plans to continue funding four (4) projects in areas focused on: 1. Developing our warfighting capabilities with Allies and Partners; 2. Enabling capabilities and deepen interoperability; 3. Develop trusted artificial intelligence and autonomy, integrated network system-of-systems, microelectronics, and human-machine interfaces. Examples include, but are not limited to: • Continuing the study of methods to counter adversarial artificial intelligence software and operational networks through model exploitation that use techniques like poisoning, evasion, or full inversion. • Continuing the development of an integrated operator-sensor network based on low-signature LPWAN and 5G ATAK clusters infrastructure enabling wide area search and barrier operations through resilient ad hoc networking. In FY 2024, the AA Subgroup plans to complete funding of four (4) projects in areas focused on: 1. Developing our warfighting capabilities with Allies and Partners; 2. Enabling capabilities and deepen interoperability; 3. Develop trusted artificial intelligence and autonomy, integrated network system-of-systems, microelectronics, and human-machine interfaces. Examples include, but are not limited to: • Completion of an edge analytics application and plugin for the Tactical Assault Kits (TAK) which generate objective 3D maps from actively or passively collected small unmanned aerial systems (sUAS). • Continuing the spiral development of the Enhanced Electronic Warfare Support System that enhances signal-processing performance and develops a supplemental signals reference library improving system machine learning capabilities. ***FY 2025 Plans:*** In FY 2025, the AA Subgroup plans to complete seven (7) projects in areas focused on: 1. Developing our warfighting capabilities with Allies and Partners; 2. Enabling capabilities and deepen interoperability; 3. Develop trusted artificial intelligence and autonomy, integrated network system-of-systems, microelectronics, and human-machine interfaces. Examples include, but are not limited to:			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Development of a modeling software to better understand non-linear and non-kinetic impacts of irregular warfare activities following the Correlation of Forces and Means (COFM) framework for kinetic effects and attrition of enemy forces. • Development of an analytical tool that will generate synthetic libraries improving Computed Tomography (CT) and Advanced Imaging Technology (AIT) in screening baggage and passengers. • Development of an AI/ML enabled operations/missions planning tool that analyzes salient battlefield variables and formulates viable courses of action (COA) by employing orchestrated, multi-model AI algorithms to triage viable COAs. Human users will benefit by having near real time decision recommendations provided by the AI. • Development of an enterprise analytics system to support a deployable 3-D printing capability. The system will enable replication of select parts and special tools that might be required to sustain operations while deployed in forward environments. • Complete development of an integrated operator-sensor network based on low-signature LPWAN and 5G ATAK clusters infrastructure enabling wide area search and barrier operations through resilient ad hoc networking. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase in funding supports the emergence and demand for the greater use of Artificial Intelligence (AI) and Machine Learning (ML) and to integrate these capabilities into enhanced, complex systems.			
Title: CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR, AND EXPLOSIVES (CBRNE)	7.565	9.764	9.599
Description: The CBRNE Subgroup's objective is to improve defense capabilities to meet tomorrow's CBRNE threats. The subgroup focuses on threat characterization; materials attribution; personal protective equipment; detection of CBRNE materials at trace and bulk levels at point, proximity and stand-off distances; development of information resources and decision support tools to assist response elements with risk-based decision making; and consequence management for post-event activities. ***FY 2024 Plans:*** For FY 2024, the CBRNE Subgroup is currently evaluating requirements and proposals and plans to initiate funding 5 new projects focused on 1) collaborating with our NATO Allies and Partners; 2) developing key enabling capabilities and deepening interoperability; 3) lethal, sustainable, resilient, survivable, agile, and responsive future force; 4) seed opportunities in Biotechnology, Quantum Science, Advanced Materials, and Clean-energy technology: • Assessment of microfluidics and their impact on the feasibility of threat material production using atypical synthesis routes. • Development of a technology to maintain the viability and integrity of CB materials and samples. • Development of a library of techniques and methods in the field of synthetic biology that may be subject to misuse. • Identification of a textile barrier material which does not incorporate any polyfluoroalkyl substances (PFAS) and can be used in the production of National Fire Protection Association Class 3 Protective Ensembles capable of passing certification testing. • Evaluation of the effect and impact of mitigation measures, including the effectiveness of various chemical filtration mitigation measures, detection equipment, and evacuation and shelter in place procedures.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
In FY 2024, the CBRNE Subgroup plans to continue funding 15 projects in areas focused on 1) collaborating with our NATO Allies and Partners; 2) integrated deterrence with counterparts across USG and Allies and Partners; 3) developing key enabling capabilities and deepen interoperability; 4) lethal, sustainable, resilient, survivable, agile, and responsive future force; 5) rapid experimentation, acquisition and fielding; 6) seed opportunities in Biotechnology, Quantum Science, Advanced Materials, and Clean-energy technology. Examples include, but are not limited to: • Development of fieldable prototype sensors for monitoring complex wastewater samples and detecting biological agents of concern. • Enhancing mitigation techniques to reduce the impact of threat releases in transportation platforms and confined spaces. • A multi-year test and evaluation program for the identification and rapid laboratory and field evaluation of emerging commercial and near-commercial explosive detection technologies to facilitate the acceleration, improvement, and fielding of promising capabilities. • Development, validation, and/or sharing microbial assays and techniques for attribution of bioterrorist agents. In FY 2024, the CBRNE Subgroup plans to complete funding 30 projects in areas focused on 1) collaborating with our NATO Allies and Partners; 2) integrated deterrence with counterparts across USG and Allies and Partners; 3) developing key enabling capabilities and deepen interoperability; 4)) lethal, sustainable, resilient, survivable, agile, and responsive future force; 5) rapid experimentation, acquisition and fielding; 6) seed opportunities in Biotechnology, Quantum Science, Advanced Materials, and Clean-energy technology. Examples include, but are not limited to: • Identifying successful operational guidance for decontaminating fentanyl and its analogs. • Development of an unmanned aerial system payload to automatically detect, identify, and map chemical plumes for situational awareness. • Development of a man-portable system that can reliably detect explosives through continuous gas phase monitoring. • Development of a portable, ruggedized Raman microscopy system capable of detecting trace explosives and other residues with minimal logistical burden for operators. • Assessment and further development of the Functional Genomic and Computational Assessment of Threats (Fun GCAT) system to identify attempts to exploit natural and synthetic biology for nefarious purposes. • Development of innovative approaches to rapid screening, sample collection, and preservation of samples to enhance the exploitation of chemical and biological materials. • Optimizing the methodology for using Alternative Light Sources (ALS) systems to visualize and screen for pharmaceutical-based agent (PBA) threats.			

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Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Development of evidence and consensus-based guidance for laundry protocols and decontamination confirmation for personal protective equipment after ricin, abrin, and pharmaceutical-based agent incidents. ***FY 2025 Plans:*** In FY 2025, the CBRNE Subgroup plans to continue funding 12 projects in areas focused on 1) collaborating with our NATO Allies and Partners; 2) integrated deterrence with counterparts across USG and Allies and Partners; 3) developing key enabling capabilities and deepen interoperability 4) lethal, sustainable, resilient, survivable, agile, and responsive future force; 5) seed opportunities in Biotechnology, Quantum Science, Advanced Materials, and Clean-energy technology. Examples include, but are not limited to: • Development of fieldable prototype sensors for monitoring complex wastewater samples and detecting biological agents of concern. • Enhancing mitigation techniques to reduce the impact of threat releases in transportation platforms and confined spaces. • Determination of operationally deployed detection techniques and systems that could be further developed or exploited to provide additional chemical detection capabilities in a search environment. • Identification of a textile barrier material which does not incorporate any polyfluoroalkyl substances (PFAS) and can be used in the production of National Fire Protection Association Class 3 Protective Ensembles capable of passing certification testing. • Develop, validate, and/or share microbial assays and techniques for attribution of bioterrorist agents. • Development of a technology to maintain the viability and integrity of CB materials and samples. In FY 2025, the CBRNE Subgroup plans to complete funding 3 projects in areas focused on 1) collaborating with our NATO Allies and Partners; 2) lethal, sustainable, resilient, survivable, agile, and responsive future force: • Development of GFR related crowd modeling scenarios by independent generation of scenarios by Australian scientists using US developed software. • Assessment of microfluidics and their impact on the feasibility of threat material production using atypical synthesis routes. • Characterization of the aerial dispersion, the effects of dynamic meteorological conditions, and the impact of hard-kill countermeasures on CBR-carrying UAS. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The slight decrease in funding is reflective of Departmental Priorities and budgetary adjustments. There is no significant impact to the mission.			
Title: Explosive Ordnance Disposal/Explosive Operations (EOD/EXO)	5.768	6.222	7.029

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Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Description: The EOD/EXO Subgroup's objective is to deliver capabilities to defeat or neutralize the continuum of improvised weapons and explosive devices. EOD/EXO improves the operational capabilities of the bomb disposal and explosive operations community, consisting of military EOD, combat engineers, as well as special operations forces by developing and delivering advanced tool technologies and decision support tools to defeat improvised devices. The EOD/EXO Subgroup identifies and prioritizes multi-agency end-user requirements in collaboration with military units. EOD/EXO actively works with vendors and end-users to deliver advanced prototype systems that provide greater efficiency and increased safety for Bomb Technicians who investigate, access, evaluate, and if needed, render safe or dispose of suspect devices. ***FY 2024 Plans:*** In FY 2024, the EOD/EXO Subgroup plans to initiate funding for 3 projects and speed their delivery to the warfighter in the areas focused on 1) Data integration, software, and artificial intelligence efforts 2) Speed and accuracy improvements in detection and targeting, and 3) Development of key enabling capabilities and deepened interoperability as shown below: • Development of a collection of 2-D images and 3-D scans of inert or inerted military ordnance, improvised explosive devices (IED) and IED-related components. These scans will help train artificial intelligence (AI) and machine learning (ML) algorithms to identify ordnance items in different orientations as well as provide trainers a collection of accurate, well documented graphics for training EOD and Unexploded Ordnance (UXO) personnel. • Development of a Siri/ChatGPT-like capability for Joint Service EOD technicians that act as a virtual reach-back capability. This would give the technician the ability to query questions of operational relevance that could be accessed without an internet connection. • Update tools and procedures used to explosively breach structures and dispose of ordnance items without causing high order detonations through a bilateral agreement with Defense R&D Canada (DRDC). In FY 2024, the EOD/EXO Subgroup plans to continue funding 4 project efforts and speed their delivery to the warfighter in areas focused on 1) Integration of data, software, and artificial intelligence, and 2) Development of warfighting capabilities together with those of our Allies and partners as shown below: • Bilateral information exchange between U.S.-based bomb technicians and members of the Israel National Police Bomb Disposal Division. • Development of a comprehensive and shareable dataset that will include multi-angle photographs and x-ray images of IEDs, IED components, and printed circuit boards (PCBs) in various configurations and orientations. • Development of ML algorithms that identify IEDs and ordnance using cameras and mobile computing technologies to enhance the safety and reduce the cognitive burden of counter IED (CIED) operators in high threat environments.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Design and develop a capability to remotely x-ray, manipulate, access, and interrogate an IED or explosive hazard to collect improved intelligence from the device. In FY 2024, the EOD/EXO Subgroup plans to complete funding 2 project efforts and speed their delivery to the warfighter in areas focused on 1) Integration of data, software, and artificial intelligence, and 2) Development of warfighting capabilities together with those of our Allies and partners as shown below: • Design and develop a ceramic cutting tool to be utilized by EOD and bomb disposal technicians to enhance capabilities of the US and Israel to effectively perform hand entry procedures on IEDs. • Develop ML algorithms that identify IEDs, ordnance items, and circuit boards using mobile computing technologies and cameras to assist EOD technicians during sweep operations. ***FY 2025 Plans:*** In FY 2025, the EOD/EXO Subgroup plans to continue funding 3 projects in the areas focused on 1) Develop our warfighting capabilities together with those of our Allies and partners, and 2) Integrate data, software, and artificial intelligence efforts and speed their delivery to the warfighter. • Bilateral information exchange between U.S.-based bomb technicians and members of the Israel National Police Bomb Disposal Division. • Development of a Siri/ChatGPT-like capability for Joint Service Explosive Ordnance Disposal (EOD) technician that act as a virtual reach-back capability. This would give the technician the ability to query questions of operational relevance that can be accessed without an internet connection. • Design and develop a capability to remotely x-ray, manipulate, access, and interrogate an IED to collect as much intelligence off the device as possible. In FY 2025, the EOD/EXO Subgroup plans to complete funding 4 project efforts and speed their delivery to the warfighter in areas focused on 1) Integration of data, software, and artificial intelligence, and 2) Development of warfighting capabilities together with those of our Allies and partners as shown below: • Development of ML algorithms that identify conventional ordnance and IEDs using cameras and mobile computing technologies to enhance safety and reduce the cognitive burden of CIED operators in high threat environments. • Development of a collection of 2-D images and 3-D scans of inert or inerted military ordnance, IEDs and IED-related components. These scans will help train AI and ML algorithms to identify ordnance items in different orientations, as well			

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Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
as providing trainers a collection of accurate, well documented graphics for training EOD and Unexploded Ordnance (UXO) personnel. • Development of a comprehensive and shareable dataset that will include multi-angle photographs and x-ray images of IEDs, IED components, and printed circuit boards in various configurations and orientations. • Design and develop a capability to remotely x-ray, manipulate, access, and interrogate an IED or explosive hazard to collect improved intelligence from the device. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase in funding is reflective of Departmental priorities with those of our Allies and partners to integrate data, software, and artificial intelligence into EOD systems.			
Title: Indirect Influence and Competition (I2C) ***Description:*** The Indirect Influence and Competition (I2C) Subgroup's objective is to develop new concepts and capabilities for warfighters and interagency partners. In accordance with the National Defense Strategy, projects emphasize preparation to defeat adversaries, including great powers' proxies and irregular surrogates, and succeed in a wide range of contingencies in both physical and informational domains. In order to establish and reinforce IW as a core competency, I2C will engage in operational assessment, concept development, and independent validation of unique prototype capabilities to identify, confront, and defeat evolving threats across the range of military operations as well as those below the threshold of conventional war. ***FY 2024 Plans:*** In FY 2024, the I2C Subgroup plans to initiate funding four (4) projects in areas focused on: 1. Enhancing our ability to operate in the information domain and effectively compete and achieve influence advantage, with China as the pacing challenge; 2. Supporting integrated deterrence; 3. Building enduring advantages. Examples include, but are not limited to: • Defining and developing new capabilities for the modern Psychological Operations (PSYOP) enterprise that are ready for integration into PSYOP curriculum and doctrine. • Development of a system consisting of cameras, communications equipment and other low-cost sensors that can be used at scale by commercial fishing fleets to enable maritime domain awareness to counter illegal, unreported and unregulated fishing (IUUF). • Leveraging data science and machine learning research to apply prompting approaches for conversing with large language models (LLMs) in non-English languages to support pre-testing and target audience analysis during influence operations. • Supporting an independent, third-party review of the current state of generative AI acquisition, development, gaps and opportunities across the DoD relevant to information operations.	5.766	6.668	6.336

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
In FY 2024, the I2C Subgroup plans to continue funding one (1) project focused on: 1. Enhancing our ability to operate in the information domain and effectively compete and achieve influence advantage, with China as the pacing challenge; 2. Supporting integrated deterrence; 3. Building enduring advantages. Examples includes: • Development of a low-cost multi-role platform to enable influence, surveillance and kinetic strike in grey zone and denied area operations. In FY 2024, the I2C Subgroup plans to complete funding five (5) projects in areas focused on: 1. Enhancing our ability to operate in the information domain and effectively compete and achieve influence advantage, with China as the pacing challenge; 2. Supporting integrated deterrence; 3. Building enduring advantages. Examples include, but are not limited to: • A unique technical solution that overcomes difficulties addressing mis- and dis-information at scale on Social Media platforms TikTok and Telegram. • Development of small containers, or “Air Delivery Vehicles” (ADVs) that can be safely air dropped individually or in clusters from offset locations to deliver any electronic, medical, or other device that is able to fit within its payload parameters. • Development of an application for the Android Tactical Assault Kit (ATAK) that allows users to share and visualize civil information across the Interagency (IA) necessary to drive whole-of-government influence operations. • Development of an advanced audience segmentation and psychographic characterization suite for use in target audience analysis, influence campaign development, and enhanced assessment. • Development of an Information Warfare Enabler Kit, Detachment (IWEK-D) to ensure interoperability of proposed COTS solutions and enable Psychological Operations Detachments (PSYDETs) the flexibility to operate across different operational environments while updating equipment to the modern industry standard. ***FY 2025 Plans:*** In FY 2025, the I2C subgroups plans to complete funding five (5) projects in areas focused on: 1. Enhancing our ability to operate in the information domain and effectively compete and achieve influence advantage, with China as the pacing challenge; 2. Supporting integrated deterrence; 3. Building enduring advantages. Examples include, but are not limited to: • Completing the development and initial operational testing of a low-cost multi-role platform to enable tactical level influence, surveillance and kinetic strike in grey zone and denied area operations. • Completing the definition and development of new capabilities for the modern PSYOP enterprise that are ready for integration into PSYOP curriculum and doctrine. • Completing a capability that leverages data science and machine learning research to apply prompting approaches for conversing with LLMs in non-English languages to support pre-testing and target audience analysis during influence operations.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Completing development of a system consisting of cameras, communications equipment and other low-cost sensors that can be used at scale by commercial fishing fleets to enable maritime domain awareness in order to counter IUUF. • Completing an independent, third-party review of the current state of generative AI acquisition and development across the DoD relevant to information operations. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease in funding is reflective of Departmental priorities and budgetary adjustments. The mission has shifted towards the development of novel capabilities, methodologies, and approaches to more effectively compete and achieve influence advantage across the informational, physical and cognitive domains.			
Title: Protection, Survivability, and Recovery (PSR)	6.071	6.761	5.383
Description: The Protection, Survivability, and Recovery Subgroup's objective is to develop new equipment, standards, reference tools, and emerging counter-unmanned aerial system (C-UAS) technologies, to improve the protection of personnel and critical infrastructure. Projects focus on leveraging innovative technologies such as automated information management systems, communication devices, tagging, tracking, and locating devices, mobile surveillance systems, personal and vehicle protection equipment, as well as UAS detection and mitigation systems to enhance protection and survivability of personnel. ***FY 2024 Plans:*** For FY 2024, the PSR Subgroup plans to initiate funding 2 project, together with our Allies and partners, in areas focused on improving the speed and accuracy of C-UAS detection and mitigation capabilities in both urban and remote locations against DoD Group 1 to Group 3 UAS, to include the use of directed energy. Also, in FY 2024, the PSR Subgroup plans to initiate funding 2 projects in areas focused on protection and survivability. Examples include, but are not limited to: • Develop an optical lock-and-track capability combined with a remote weapon system platform for hard-kill defeat. • Integrate a detection system with an autonomous sUAS platform canister and launch system. • Development of a face shield for military insertion missions. • Development of a helmet liner improving blunt impact protection for use in the Ops-Core family of tactical head-borne systems. In FY 2024, the PSR Subgroup plans to continue funding 8 projects in areas focused on improving the speed and accuracy of C-UAS detection and mitigation capabilities with our Allies and partners, and protection and survivability. Examples include, but are not limited to: • Development of multi-mission UAS that could perform C-IED and C-UAS missions on top of ISR missions. • Development of advanced optical ground-based detection systems to detect small UAS. • Continue Develop a CUAS system that enables protection of point targets and strategic sites. • Characterize the blast overpressure and acoustic exposure from small arms to operator, to elucidate which small-arms and conditions are associated with increased risk of potentially harmful exposure levels.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
In FY 2024, the PSR Subgroup plans to complete funding 19 projects in areas focused on improving the speed and accuracy of C-UAS detection and mitigation capabilities with our Allies and partners, and protection and survivability. Examples include, but are not limited to: • Development of a standard, low-cost test fixture and operating instructions to assess the performance and efficacy of non-pneumatic limb tourniquets. • Development of a standard, ceramic-faced ballistic plate that will result in a fully densified ceramic that can be used in a highly curved ceramic system, for use in female fit body armor. • Development of a system that will baseline and track multiple elements of patient information, and wirelessly provide continuous updates and trends for triage decisions. • Development of advanced optical ground-based detection systems to detect sUAS. ***FY 2025 Plans:*** In FY 2025, the PSR Subgroup plans to continue funding 3 projects, together with our Allies and partners, in areas focused on improving the speed and accuracy of C-UAS detection and mitigation capabilities, to include directed energy; and protection and survivability. Examples include, but are not limited to: • Develop a versatile and effective testing infrastructure for use in evaluating performance of UAS and C-UAS systems. • Evaluate and observe the technologies applying to and attending the CUAS Sandbox FY 2025, the PSR Subgroup plans to complete funding 8 projects in areas focused on improving the speed and accuracy of C-UAS detection and mitigation capabilities with our Allies and partners, and protection and survivability. Examples include, but are not limited to: • Development of a small arms overpressure measurement system and database to collect data relevant to mild Traumatic Brain Injury (mTBI) research. • Development of a radar system to detect small UAS in urban environments. • Development of a face shield for military insertion missions. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease of Core funding allows for an increased focus on the Congressionally directed and funded Counter-UAS RDT&E program with Israel.			
Title: Expeditionary Force Protection (EFP)	6.062	7.715	6.882
Description: The Expeditionary Force Protection (EFP) Subgroup's objective is to rapidly develop and transition expeditionary force protection capabilities and technologies to support forward deployed and domestic military, international partners,			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
interagency and first responders for Blast Effects and Mitigation; Maritime Security; Screening, Observation, Detection, and Protection; and Subterranean Environments. EFP projects focus these technology development efforts for expeditionary advance based operations, forward operating bases, subterranean operations, counter-tunnel, and maritime port and littoral environments. ***FY 2024 Plans:*** In FY 2024, the EFP Subgroup plans to initiate funding for 4 projects in areas focused on 1) Integrated deterrence with counterparts across USG and Allies and Partners, 2) develop warfighting capabilities together with those of our Allies and partners, 3) sharpen the Joint Force's technological edge, and 4) develop key enabling capabilities, and deepen interoperability. Examples include, but are not limited to: • Development of an inertial navigation system using a unique communications capability to provide units of action with the ability to project exact location of friendly forces in subterranean locations. • Classified study on geotechnical data. • Development of a subterranean tactical room clearing marker with additional sensors and communications reach back for force protection. In FY 2024, the EFP Subgroup plans to continue funding for 28 projects in areas focused on 1) integrated deterrence with counterparts across USG and Allies and Partners, 2) gain and sustain military advantages, sharpen the Joint Force's technological edge, and 3) develop key enabling capabilities, and deepen interoperability. Examples include, but are not limited to: • Development of a covert underwater (UW) night vision capability to support remote operations at night in shallow, turbid water environments. • A man-dive form-fit-function testing of industry prototype active and passive diver thermal systems in support of long endurance, cold water, combat diving operations. • Development of a Small Autonomous Unmanned Aerial System (S-UAS), delivered through either a borehole and capsule, or by hand launch, to reconnoiter and map large expanses of subterranean facilities. • Development of a testing and training fixture that will closely replicate subterranean and hard and deeply buried targets to allow for Units of Action to research and develop technological solutions. • A subterranean operations pilot course that provides the Department of Defense and Interagency a holistic overview of the operational level considerations for planning and executing missions. For FY 2024, the EFP Subgroup plans to complete funding for 36 projects in areas focused on 1) integrated deterrence with counterparts across USG and Allies and Partners, 2) gain and sustain military advantages, develop our warfighting capabilities together with those of our Allies and partners, 3) sharpen the Joint Force's technological edge, develop key enabling capabilities,			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
and deepen interoperability, 4) improve the speed and accuracy of detection and targeting. Examples include, but are not limited to: • Integration of Human Injury Prediction (HIP) for Vulnerability Assessment and Protection Option (VAPO) 7 to effectively and accurately model the effects of an explosive event. These effects include air blast propagation, fragmentation effects and patterns, human injury models, etc. • Operational test and evaluation of a handheld anomaly detection wand to detect both non-metallic and metallic objects concealed under or in clothing to support checkpoint screening and security personnel. • Development and improvement of a subterranean geophysical survey kit, configured to be expeditionary, that simplifies field operations and equipment requirements to enable more efficient data acquisition, analysis, and generation of intelligence products. • Development and testing of handheld/chest worn version of a mapping capability for subterranean environments, which creates unique 2D and 3D maps in real time. • Development of a platform that utilizes a network of airborne sensors to detect subterranean targets. • Development and evaluation of an airborne system that can detect specific subterranean aspects without requiring line of sight. ***FY 2025 Plans:*** In FY 2025, the EFP Subgroup plans to continue funding 7 projects in areas focused on 1) integrated deterrence with counterparts across USG and Allies and Partners, 2) gain and sustain military advantages, 3) develop our warfighting capabilities together with those of our Allies and partners, 4) sharpen the Joint Force's technological edge, 5) develop key enabling capabilities, and deepen interoperability, 6) develop new capabilities, including long-range strike, undersea, hypersonic, and autonomous systems, and improve intelligence and information sharing, and the integration of non-kinetic tools, and 7) improve the speed and accuracy of detection and targeting. Examples include, but are not limited to: • Hosting bi-annual data exchange with foreign partners to leverage assets and capabilities to support each country's research efforts in the area of maritime security. • Development, integration and operational test and evaluation of an extended coverage system for border protection. • Development of an inertial navigation system using a unique communications capability to provide units of action with the ability to project exact location of friendly forces in subterranean locations. In FY 2025, the EFP Subgroup plans to complete funding 25 projects in areas focused on 1) integrated deterrence with counterparts across USG and Allies and Partners, 2) gain and sustain military advantages, 3) develop our warfighting capabilities together with those of our Allies and partners, 4) sharpen the Joint Force's technological edge, 5) develop key enabling capabilities, and deepen interoperability, 6) develop new capabilities, including long-range strike, undersea, hypersonic, and			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
autonomous systems, and improve intelligence and information sharing, and the integration of non-kinetic tools, 7) improve the speed and accuracy of detection and targeting. Examples include, but are not limited to: • Classified special technical collection project to develop a small form factor collection capability. • Development of a small form factor 3D mapping and scanning device incorporated on a robotic moving platform while navigating and performing obstacle avoidance. • Development of a testing and training fixture that will closely replicate subterranean and hard and deeply buried targets to allow for Units of Action to research and develop technological solutions. • Development and testing of a miniature/tactical version of the Tunnel 3D mapping capability for subterranean environments, which creates unique 2D and 3D maps in real time. • Development of a monitoring system for subterranean targets. • Modification of the current GMV 1.1 Flyer vehicle's power train to an electrification vehicle achieving an operational range, under load, of 250 miles in order to support hard target defeat. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease of Core funding allows for an increased focus on the Congressionally directed and funded Counter Tunnel RDT&E program with Israel.			
Title: SURVEILLANCE, COLLECTION AND OPERATIONS SUPPORT	15.180	10.801	11.918
Description: The Surveillance, Collection, and Operations Support (SCOS) Subgroup's objective is to identify high-priority user requirements and special technology initiatives. SCOS projects enhance U.S. intelligence capabilities to conduct retaliatory or preemptive operations and reduce the capabilities and support available to our adversaries with China as the Pacing Threat, Russia as the Acute Threat, and Violent Extremist Organizations. ***FY 2024 Plans:*** In FY 2024, the SCOS Subgroup plans to initiate funding nine (9) projects in areas focused on: 1. Developing key enabling capabilities and deepen interoperability; 2. Improving intelligence and information sharing; 3. Building resilience in cyber and space domains; 4. Developing our warfighting capabilities together with those of our allies. Examples include, but are not limited to: • A classified project to develop a small form factor collection capability. • Five classified projects to develop special communications that have low detectability and improved range. • A classified project to develop technology to collect data from heavy machinery. • A classified project to detect and capture advanced telematics. • A classified project that develops a field device capable of generating and using waveforms for operations.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
In FY 2024, the SCOS Subgroup plans to continue funding eight (8) projects in areas focused on: 1. Developing key enabling capabilities and deepen interoperability; 2. Improving intelligence and information sharing; 3. Building resilience in cyber and space domains; 4. Developing our warfighting capabilities together with those of our allies. Examples include, but are not limited to: • Development of RFIC and initial transceiver devices from previously developed microchips. • Support to an intelligence community working group that focuses on solving communications, access, and surveillance requirements. • Development of a classified small form factor technical collection capability. • Development of a classified small form factor data storage capability. In FY 2024, the SCOS Subgroup plans to complete funding eleven (11) projects in areas focused on: 1. Developing key enabling capabilities and deepen interoperability; 2. Improving intelligence and information sharing; 3. Building resilience in cyber and space domains; 4. Developing our warfighting capabilities together with those of our allies. These 11 projects include 5 projects from the inclusion of the Forensics Exploitation and Identity Operations (FEIO) Subgroup. Examples include, but are not limited to: • A classified project to develop stratosphere operations and tactics. • A classified project to develop an electromagnetic signals signature reduction capability. • A classified project to develop a facial recognition risk reduction capability. • A classified project to develop a closed-circuit television risk reduction capability. • A project to develop a travel and identity document reference database for 24 hour a day security and forensic operations. ***FY 2025 Plans:*** In FY 2025, the SCOS Subgroup plans to continue funding two (2) projects in areas focused on: 1. Developing key enabling capabilities and deepen interoperability; 2. Developing our warfighting capabilities together with those of our allies. Examples include, but are not limited to: • Development of RFIC and initial transceiver devices from previously developed microchips. • Support to an intelligence community working group that focuses on solving communications, access, and surveillance requirements.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
In FY 2025, the SCOS Subgroup plans to complete funding fifteen (15) projects in areas focused on: 1. Developing key enabling capabilities and deepen interoperability; 2. Improves intelligence and information sharing; 3. Builds resilience in cyber and space domains; 4. Developing our warfighting capabilities together with those of our allies. Examples include, but are not limited to: • • A classified project to develop a small form factor collection capability. • Six classified projects to develop special communications that have low detectability and improved range. • A classified project to develop technology to collect data from operations heavy machinery. • A classified project to detect and capture advanced telematics. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase in funding is reflective of Departmental priorities in special communications, cyber technology, signature management, and exploitation of identity intelligence.			
Title: Tactical Offensive Support (TOS) ***Description:*** The Tactical Offensive Support (TOS) Subgroup's mission is to execute rapid research and development projects and deliver superior capabilities with training to DoD and Interagency special operations tactical teams. The development focus is enabling small tactical units by providing state of the art overmatch capabilities in: Offensive Systems; Tactical Communications; Tactical Reconnaissance, Surveillance, and Target Acquisition Systems; and Specialized Infiltration, Access and Exfiltration Systems. ***FY 2024 Plans:*** In FY 2024, the TOS Subgroup plans to initiate funding six (6) projects in areas focused on increasing lethality by: 1. Improving anti-access/area-denial-insensitive strike capabilities to defeat our adversaries at greater range; 2. Improving resiliency, by building information, decision, and C5ISR advantages, and enhancing survivability. Examples include, but are not limited to: • An unmanned ground system that integrates emerging quadrupedal robots with remote weapon platforms and advanced external optics to provide remote ground reconnaissance, surveillance, close to medium-range target acquisition, and small arms direct action capability. • A tailored, portable laser with an internal power source and cooling system, optimized for weight and accurate target engagement, capable of multiple aimed energy pulses at varying strengths that create damaging or disorienting effects on specified materials or infrastructure nodes and systems at close, medium and long ranges, without the threat of being detected by the enemy. • A next-generation lightweight machine gun tripod that facilitates rapid emplacement, increased accuracy with improved traverse and elevation, reduces overall operational load and is compatible with all current and future weapons platforms.	9.680	11.951	12.853

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• A caliber-specific, hybrid flash hider, suppressor, and muzzle brake contained in one easy to install device that will increase small tactical team lethality and allow operators to conduct target engagement with less potential for compromise. • Anti-jamming (AJ) algorithm updates to enhance a current suite of handheld and vehicle-borne "fighting radios" with Reinforcement Learning (RL) firmware capable of autonomous 'threat characterization' of an adversary's EW tactics, and then facilitating adaptive network behaviors that 'cyber-harden' SOF data transmissions and enhance low probability of detection & interception (LPD/LPI) capabilities in an IW environment. In FY 2024, the TOS Subgroup plans to continue funding three (3) projects in areas focused on increasing lethality by: 1. Improving anti-access/area-denial-insensitive strike capabilities to defeat our adversaries at greater range; 2. Improving resiliency, by building information, decision, and C5ISR advantages, and enhancing survivability. Examples include, but are not limited to: • Development of a hybrid flash hider, suppressor, and muzzle brake contained in one easy-to-install device, for multiple calibers of weapons, that overall reduces the weapons' signature and lessens recoil impulse. • Continue development of a remotely operated lighting harness integrated with GPS for canines that handlers can operate based on mission activities. In FY 2024, the TOS Subgroup plans to complete funding nineteen (19) projects in areas focused on increasing lethality by: 1. Improving anti-access/area-denial-insensitive strike capabilities to defeat our adversaries at greater range; 2. Improving resiliency, by building information, decision, and C5ISR advantages, and enhancing survivability. Examples include, but are not limited to: • A weapon system, including supermatch, subsonic, and armor piercing incendiary ammunition, to increase hit potential by 50%, and lethal effects at extreme distances. • An improved, multi-purpose type cartridge with increased muzzle velocities that demonstrates consistent accuracy to defeat current barriers at extended ranges. • A tactical deployment and recovery capability for US and UK Navy SOF surface and subsurface assets that increases environmental protection and improved signature reduction while ensuring direct interoperability between US and UK forces. • An overmatch optic that can be mounted on currently fielded small arms weapons, providing instant range, tracking and firing solution, for both ground and small Unmanned Aerial System (sUAS), during day and night operations at extended ranges. • An advanced field-configurable, multi-role, sUAS platform designed to maneuver from outdoors to indoors that can selectively detect, identify, track, distract and/or destroy a variety of targets throughout complex urban terrain, utilizing organic ISR and 'plug-and-play' lethal payload capabilities as required. • A low cost, hand-launched and recovered, fast VTOL loitering munition that employs Electro-Optical and Infrared sensors for both day and night operations to improve SOF force protection and rapid attack capability.			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• An advanced intermediate-caliber cartridge, side-fed Lightweight Assault Machine Gun (LWAMG) that allows machine gunners to provide effective volumes of fire and on-target performance at increased ranges ***FY 2025 Plans:*** In FY 2025, the TOS Subgroup plans to continue funding one (1) project in area focused on increasing lethality by improving anti-access/area-denial-insensitive strike capabilities to defeat our adversaries at greater range. Example includes: • A tailored, portable laser with an internal power source and cooling system, optimized for weight and accurate target engagement, capable of multiple aimed energy pulses at varying strengths that create damaging or disorienting effects on specified materials or infrastructure nodes and systems at close, medium and long ranges, without the threat of being detected by the enemy. In FY 2025, the TOS Subgroup plans to complete funding ten (10) projects in areas focused on increasing lethality by: 1. Improving anti-access/area-denial-insensitive strike capabilities to defeat our adversaries at greater range; 2. Improving resiliency, by building information, decision, and C5ISR advantages, enhancing survivability. Examples include, but are not limited to: • A higher magnification optic equivalent to new and advanced extreme long-range weapon systems, that allows positive identification at extreme long ranges, with a digital overlay capable of receiving and displaying external information, such as target distance, as well as ballistic and weapon data. • A caliber-specific, hybrid flash hider, suppressor, and muzzle brake contained in one easy to install device that will increase small tactical team lethality and allow operators to conduct target engagement with less potential for compromise. • A remotely operated lighting harness integrated with GPS, camera, and physiological sensor for canines that handlers can operate based on mission activities. • An advanced clip-on lens that attaches to existing INOD thermal weapon sights and allows substantial improvements to a sniper's extreme range target engagement capability, while maintaining a full field of view in their day and night optics. • A next-generation NDAA compliant, cyber-hardened offensive UAS using assured navigation and network communications, integrated AI, operator-controlled autonomy and advanced-lethality payloads that can fly, identify and destroy targets unhindered by current and evolving counter-UAS defenses. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase in funding reflects an expected growth in RDT&E support for INDOPACOM and USSOCOM to improve US SOF, DoD and foreign partners tactical capabilities that increase lethality and improve tactical communications.			
Title: Human Performance and Training (HPT)	6.372	7.745	8.067
Description: The Human Performance and Training (HPT) Subgroup's objective is to provide SOF, DoD, and interagency partners with agile, rapid response, R&D capabilities for optimizing performance in the operational environment and increasing			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
readiness for tomorrow's threats. To meet this objective, the subgroup develops human-centered technologies that are performance outcome focused in the areas of immersive learning technology, human performance optimization, and innovative training and educational concepts. HPT's capabilities are implemented globally to prepare for critical missions in any operational environment to identify, disrupt, and defeat threats. ***FY 2024 Plans:*** In FY 2024, the HPT Subgroup plans to initiate 5 projects in areas focused on 1) gaining and sustaining military advantages, 2) building resilience in cyber and space domains, 3) developing our warfighting capabilities together with those of our allies and partners, and 4) enhancing human performance and training. Examples include, but are not limited to: • An augmented reality system for increased training realism of high-risk scenarios through the mixing of real-world environments and virtual objects/entities. • A Program of Instruction (POI) to teach basic jungle tactics and provide a common-core institutional knowledge base regarding the type of warfare encountered against peer threats in SOUTHCOM and INDOPACOM. • A series of three (3) courses focused on SF operational and tactical core activities in space. In FY 2024, the HPT Subgroup also plans to complete 9 projects in areas focused on 1) sharpening the joint force's technological edge, 2) gaining and sustaining military advantages, 3) developing our warfighting capabilities together with those of our allies and partners, 4) building resilience in cyber and space domains, 5) seeding opportunities in biotechnology, quantum science, advanced materials, and clean-energy technology, and 6) enhancing human performance and training. Examples include, but are not limited to: • A synthetic Internet sandbox to enable intelligence analysts and information operations personnel to train on tools and methodologies for the collection, analysis, and exploitation of adversary's online information, as well as engaging in large-scale Unconventional Warfare (UW) exercises, while mitigating the challenges and risks associated with training on the open, publicly visible Internet. • Techniques for developing accurate and realistic 3D virtual cities for immersive, virtual reality-based pre-deployment operations training, mission planning, and mission rehearsal. • An AC-130J Virtual Reality Combat Mission Trainer to enable operational crews to engage in mission tasks within a simulated environment that replicates sensory information of real-world mission performance found in joint mission essential task (JMET) environments. • A multi-sensory (e.g., visual, auditory, tactile) and immersive military freefall jump master simulator to enhance classroom training and rehearsal of spotting techniques and aircraft procedures over virtual drop zones (DZ) modeled after real world DZs prior to going up in the air.			

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
• Advanced Cyber Physical Testbeds that integrate real-world sophisticated hardware and software rather than virtualized instantiations of peer and near-peer adversaries' operating environments in order to train SOF cyber operators to conduct full spectrum cyber effects operations on par with peer and near-peer adversaries. • Simulation-based immersive training to expose inexperienced military working dog (MWD) handlers to a broad range of tactical decision-making scenarios and dog behaviors prior to and as an integral part of working with a real-world MWD. ***FY 2025 Plans:*** In FY 2025, the HPT Subgroup plans to continue 1 project in areas focused on 1) gaining and sustaining military advantages and 2) enhancing human performance and training: • A POI to provide the knowledge and skills to manufacture the components of unmanned systems (UxS) using equipment organic to the team. In FY 2025, the HPT Subgroup plans to complete 4 projects in areas focused on 1) gaining and sustaining military advantages, 2) building resilience in cyber and space domains, 3) developing our warfighting capabilities together with those of our allies and partners, and 4) enhancing human performance and training. Examples include, but are not limited to: • A virtual reality environment that allows personnel to immerse themselves in an accurate and realistic digital twin of any environment and move naturally for improved mission planning and rehearsal. • Special Operations Forces biometric assessment methods to illuminate the stresses of operations involving dense urban and subterranean environment. This data will be used to develop training interventions to mitigate these stresses before, during, and after mission execution. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase reflective of Departmental priorities in human performance optimization, cyber and space training, and immersive learning technology.			
Accomplishments/Planned Programs Subtotals	68.407	75.593	76.639

	FY 2023	FY 2024
Congressional Add: Combating Terrorism Technology Support (CTTS)	80.500	-
FY 2023 Accomplishments: FY 2023 congressional add supports the CTTS Tunneling program, Counter-UAS, Sub-Captivating Munitions, & AI in Explosive Ordinance Disposal.		
Congressional Adds Subtotals	80.500	-

Exhibit R-2A, RDT&E Project Justification: PB 2025 Office of the Secretary Of Defense		Date: March 2024
Appropriation/Budget Activity 0400 / 3	**R-1 Program Element (Number/Name)** PE 0603122D8Z / *Combating Terrorism Technology Support*	**Project (Number/Name)** 484 / *Combating Terrorism Technology Support (CTTS)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A