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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*

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	129.454	28.168	24.328	30.594	-	30.594	31.124	31.647	32.207	32.732	-	-
328: *Science and Technology Analytic Assessments*	117.483	21.060	17.335	22.728	-	22.728	23.018	23.297	23.610	23.884	-	-
177: *Technology Watch/Horizon Scanning*	11.971	7.108	6.993	7.866	-	7.866	8.106	8.350	8.597	8.848	-	-

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

This PE supports the Department's initiatives to Defend the Homeland, Deter Aggression, Prevail in Conflict, and Build an Enduring Advantage.

This PE directly supports the Office of Strategic Intelligence and Analysis (OSI&A) for the Office of the Under Secretary of Defense, Research and Engineering (OUSD(R&E)). OSI&A's campaign of analysis approach integrates intelligence reporting and independent technical expertise to execute comparative assessments. These assessments inform investment decisions and shape the development of innovative capabilities to address emerging threats and opportunities from a diverse range of state and non-state actors as outlined in the National Defense Strategy (NDS) and as reported through the Intelligence Community (IC). The complexity of capability gaps in the future operating environment combined with the speed of emerging threat development requires a broadly scoped "red vs blue" approach. This approach provides integrated baselines for OUSD(R&E) analyses and investment decisions that are reflective of cross-cutting Joint Force plans, missions, and concepts. Trends and potential impacts related to global critical and emerging technology developments are analyzed and assessed, and findings are integrated with IC reporting to enable decision advantage in OUSD(R&E) and inform strategies for maintaining technological superiority and modernizing key capabilities for the Joint Force.

Analysis and assessments are focused on challenges related to NDS and National Defense Science and Technology Strategy (NDSTS) objectives and competitors' research and development trends. Two lines of effort accomplish this mission:
1) Science and Technology (S&T) Analytic Assessments integrate information from the acquisition, intelligence, operational, and S&T communities to quantify key attributes of emerging critical challenges and assess counter technology opportunities. The framework includes execution of the following activities:
- Net Technical Assessments (NTA). OSI&A partners with Federally Funded Research and Development Centers, University Affiliated Research Centers, industry, and academia to conduct comparative assessments of critical technologies to determine technological advantage and inform investment decisions across the Department of Defense (DoD) S&T Enterprise. Critical technologies of interest to the DoD and strategic context drawn from the NDS, NDSTS, and DoD planning efforts set the bounds for the assessment of technological applications that could deliver operational advantage to the Joint Force along future development and deployment timelines.
- Operational and Technical Assessments. Evaluations of DoD operational scenarios and warfighting concepts that identify operational gaps, incorporating IC-derived adversary threat trends and the technical demands of the future operational environment to determine challenges that could be mitigated or eliminated through the application of emerging and disruptive technologies.

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*

- Technology-based Wargames. Execution of an array of purpose-built games and workshops that integrate the operational, technology, and intelligence communities to characterize emerging technologies in the context of the future operational environment, evaluate their disruptive potential, and identify opportunities and challenges. Insights from these efforts inform programmatic and policy decisions related to the development of operational concepts across the Department.

2) Technology Watch and Horizon Scanning combines analysis of complex, unstructured, open-source data sets with intelligence reporting to enable monitoring and analysis of global research and development activities, underpinning characterization of the global technology environment and informing portfolio investment decisions across the DoD S&T Enterprise. These characterizations establish the global technology landscape that informs OSI&A S&T analytic assessment efforts and frames the larger campaign of analysis. The framework includes the following activities:
- Technology Watch. Analysis of global open-source science, technology, research, and development efforts and in-person conference, symposium, and workshop attendance to characterize the global landscape of known science, technology, and concepts and to identify trends that can provide indicators and warnings of disruptive technology advances. Integrating the methodologies and findings from technology forecasting, maturation assessments, and NTA efforts supports global research watch activities to identify technological development areas for research and investment.
- Horizon Scanning. Systematic execution of analytic techniques applied to large, complex open-source data for the identification of emerging science and technology capable of altering the future operating environment.
- Intelligence Integration. Structured execution of recurring technical exchanges between the OUSD(R&E) stakeholders and S&T intelligence subject matter experts. These engagements enable the direct exchange of OUSD(R&E) intelligence needs and IC finished intelligence products to compliment open-source findings and establish a comprehensive understanding of the global technology landscape. Additionally, OUSD(R&E) level input and perspectives support IC scientific and technical intelligence initiatives and inform intelligence community priorities, investment decisions, and strategic direction.
- International Partner Collaboration. Cooperative identification and early-stage investigation of emerging technologies that generate opportunities and solve critical challenges common to the national security of the U.S. and our international partners.

Due to the emergent nature of challenges and threats, specific analytic foci are unlikely to be identified beyond the current budget year. The process for developing and executing assessments can span fiscal years and may have multiple phases as trends progress and new information arises through open-source technology trend analysis and intelligence reporting.

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 0603288D8Z *I Science and Technology (S&T) Analytic Assessments*

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	28.168	24.328	24.840	-	24.840
Current President's Budget	28.168	24.328	30.594	-	30.594
Total Adjustments	0.000	0.000	5.754	-	5.754
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustment	-	-	5.754	-	5.754

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 328: *Science and Technology Analytic Assessments*		
Congressional Add: *Strategic Multilayer Assessment Cell*	5.500	-
Congressional Add Subtotals for Project: 328	5.500	-
Congressional Add Totals for all Projects	5.500	-

Change Summary Explanation

FY 2025 increase of $5.692 million enables an agile and responsive resourcing posture to execute net technical assessments and analyses of global emerging threats and technological developments, in addition to collaborative analysis with international partners. Funds realigned from PE0602251D8Z227 - Applied Research for the Advancement of S&T Priorities. In addition, funding increase of $0.062 million is for Economic Assumptions.

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	Project (Number/Name) 328 / *Science and Technology Analytic Assessments*	

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
328: *Science and Technology Analytic Assessments*	117.483	21.060	17.335	22.728	-	22.728	23.018	23.297	23.610	23.884	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Science and Technology (S&T) Analytic Assessments Project code funds comparative assessments that integrate intelligence community insights and independent technical analysis to shape the development of innovative capabilities and address emerging threats from a diverse range of state and non-state actors as outlined in the National Defense Strategy (NDS) and as reported through the Intelligence Community (IC).

Engineering and technology analysis is performed by Federally Funded Research and Development Centers, University Affiliated Research Centers, industry, and academia partners focused on analysis of critical Department of Defense (DoD) S&T investments and breakthroughs by U.S. strategic competitors. These assessments compare global science, technology, research and development efforts, and current state-of-the-science, and identify technology development strategies. Main lines of effort include:
- Net technical assessments that characterize the technical state-of-the-art, measure relative national standing, and identify and assess technology applications for accomplishing strategically important military objectives to inform the Office of the Under Secretary of Defense, Research and Engineering (OUSD(R&E)) technology development and investment decisions.
- Quantitative, engineering-level analyses of novel technologies and concepts that identify potential areas of future technology overmatch.
- Independent assessments of critical technology research and development efforts that compare U.S. and competitor nations.

Operational and technical assessments identify prioritized operational issues and associated technology focus areas through comprehensive kill chain analysis across all domains through the year 2040. Characterizations of future operating environments and associated challenges inform the scoping and design efforts of S&T and engineering analyses for DoD. Main lines of effort include:
- Technology-based Wargames that integrate information from the intelligence, technology, and operational communities to identify opportunities stemming from emerging technologies and evaluate the demands of the future operational environment. The outputs inform future concept and capability development, prototyping and experimentation activities, threat forecasting, and DoD S&T investments.
- Operational Analyses focused on the dynamic interaction of U.S., ally and partner, and adversary military capabilities in a future operating environment. This analysis fuses IC assessments of future threats and operational impacts to the Joint Force, to enable technology-specific analysis in areas of critical challenge or opportunity.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Science and Technology Analytic Assessments	15.560	17.335	22.728
Description: The Science and Technology (S&T) Analytic Assessments Project code supports the development of innovative capabilities to meet emerging threats from the diverse range of state and non-state actors confronting the U.S. These capabilities			

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	**Project (Number/Name)** 328 / *Science and Technology Analytic Assessments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
support the objectives of the NDS and the National Military Strategy. Throughout this process the analysis will be tightly coupled with both the IC and the operational community. ***FY 2024 Plans:*** Engineering and Technology Analysis: - Conduct engineering- and physics-based threat assessments informed by IC reporting to identify gaps in U.S. capabilities. - Conduct analysis of novel technology and concepts to address capability gaps and potential counters to emerging technologies in future operating environments. - Conduct independent assessments of U.S. and strategic competitors' critical capabilities and technology development. - Conduct comparative assessments of and report on efforts by the U.S. and the People's Republic of China to advance critical modernization technologies with military applications (FY 2022 NDAA §1251). Operational and Technical Assessment: - Update foundational data of U.S. and adversary capabilities to enable mission-oriented analysis of emerging threats. - Assess anticipated U.S. and adversary capability solutions in the context of DoD-approved operational scenarios and associated timelines to illustrate areas of potential operational overmatch. - Produce comparative assessments of existing and planned U.S. capabilities and weapons systems characterizing emerging threat systems and capabilities in future operating environments. - Design and execute technology-based wargames to inform and align DoD modernization activities with joint concept and capability requirements and threat forecasting. ***FY 2025 Plans:*** Engineering and Technology Analysis: - Continue to conduct engineering- and physics-based threat assessments informed by IC reporting to identify gaps in U.S. capabilities. - Continue to conduct analysis of novel technology and concepts to address capability gaps and potential counters to emerging technologies in future operating environments. - Continue to conduct independent assessments of U.S. and strategic competitors' critical capabilities and technology development. Operational and Technical Assessment: - Continue to update foundational data of U.S., ally and partner, and adversary capabilities to enable mission-oriented analysis of emerging 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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	**Project (Number/Name)** 328 / *Science and Technology Analytic Assessments*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Continue to assess anticipated U.S., ally and partner, and adversary capability solutions in the context of DoD-approved operational scenarios and associated timelines to illustrate areas of potential operational overmatch. - Continue to produce comparative assessments of existing and planned U.S. capabilities and weapons systems characterizing emerging threat systems and capabilities in future operating environments. - Continue to design and execute technology-based wargames to inform and align DoD modernization activities with joint concept and capability requirements and threat forecasting. Net Technical Assessments: - Assess technological state-of-the art and trends to capture relative national standing for focal technologies. - Explore military operational implications to understand operational relevance, technology timeline, and uncertainties associated with the applications of the focal technologies. - Integrate key competitor perspectives through intelligence community engagement ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The FY 2025 increase of $5.346 million funds: - Net Technical Assessment efforts - An agile analytic capability that is responsive to emerging threats and technological developments that arise through open-source analysis and intelligence reporting.			
Accomplishments/Planned Programs Subtotals	15.560	17.335	22.728

	FY 2023	FY 2024
Congressional Add: Strategic Multilayer Assessment Cell	5.500	-
FY 2023 Accomplishments: Funding in FY 2023 will allow execution of the Strategic Multilayer Assessment (SMA) Cell. The SMA Cell supports senior leadership in the Combatant Commands (CCMDs) with actionable assessments of complex operational and technical challenges. SMA efforts leverage multi-agency, multi-disciplinary approaches to answer the Combatant Commanders' key strategic questions that are not within the DoD's core competency. The assessments help maintain our competitive advantage in an increasingly complex global environment. SMA assessments are framed during the year of execution and are in response to specific tasking from senior leadership in the CCMDs. The SMA Cell researches options from across the U.S. Government, foreign partners, academia, and the private sector. Joint Chiefs of Staff Directorate for Operations (J-3) and the Office of the Under Secretary of Defense for Research and Engineering share management and oversight		

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	**Project (Number/Name)** 328 / *Science and Technology Analytic Assessments*

	FY 2023	FY 2024
responsibilities for SMA efforts. Joint Chiefs of Staff Directorate for Operations (J-3) plans and executes SMA efforts.		
Congressional Adds Subtotals	5.500	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	Project (Number/Name) 177 / *Technology Watch/Horizon Scanning*	

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
177: *Technology Watch/Horizon Scanning*	11.971	7.108	6.993	7.866	-	7.866	8.106	8.350	8.597	8.848	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Technology Watch/Horizon Scanning (TW/HS) Project Code supports emerging Science and Technology (S&T) characterization through the identification of technology research trends and the forecasting of concepts and technology maturation with the potential for military application through 2040. TW/HS activities inform the Department's investment decisions to achieve global competitive advantage. The program provides tailored technical assessments that identify the military relevance, research opportunities, and investment targets for emerging S&T. The Office of Strategic Intelligence and Analysis (OSI&A) enables intelligence-informed decision advantage across the S&T enterprise portfolio and informs the U.S. S&T intelligence posture by establishing linkages across the Office of the Under Secretary of Defense, Research and Engineering (OUSD(R&E)) and the Intelligence Community (IC) entities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
Title: Technology Watch/Horizon Scanning	7.108	6.993	7.866
Description: The program utilizes multiple analytic methodologies to identify nascent technologies and characterize the future global S&T landscape. This characterization, in combination with other technical analysis performed by OSI&A, will inform strategic technology development decisions across the OUSD(R&E) Enterprise. OSI&A works in collaboration with international allies and partners to further the field of critical and emerging technology research and analysis. ***FY 2024 Plans:*** Technology Watch and Forecasting: - Conduct systematic analysis (i.e., horizon scan) of complex, unstructured open-source data to identify emerging science, technology, and concepts. - Characterize the global landscape of known science, technology, and concepts to identify trends that can provide indicators and warnings of disruptive technology advances. - Integrate methodologies and findings from technology scanning and forecasting, maturation assessments, data analysis, and net technical assessment efforts to characterize global developments in science and technology research. Intelligence Integration: - Conduct formal technical exchanges between the OUSD(R&E) stakeholders and IC subject matter experts to establish a common understanding of global technology developments.			

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	**Project (Number/Name)** 177 / *Technology Watch/Horizon Scanning*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Coordinate intelligence community (IC) support for the Office of Strategic Intelligence and Analysis (OSI&A)-sponsored technical analysis and independent comparative technology assessments and provide Office of the Secretary of Defense (OSD)-level support to Science and Technology (S&T) intelligence initiatives. - Direct the Defense Intelligence Enterprise to provide analytic input to Research and Engineering (R&E)-defined critical intelligence needs and disseminate the IC response to R&E stakeholders. International Partner Engagement: - Implement and execute a strategy for collaborating on the discovery and early-stage exploitation of scientific breakthroughs and emerging technologies through bilateral and multinational partnerships. ***FY 2025 Plans:*** Technology Watch and Forecasting: - Continue to conduct systematic analysis of scientific research databases to identify emerging science, technology, and concepts. - Continue to characterize the global landscape of known science, technology, and concepts to identify trends that can provide indicators and warnings of disruptive technology advances. - Continue to integrate methodologies and findings from technology scanning and forecasting, maturation assessments, data analysis, and net technical assessment efforts to characterize global developments in science and technology research. - Advance the established U.S. – UK S&T Futures bilateral strategy through the continued discovery and early-stage exploitation of scientific breakthroughs to inform research and investment decisions that capitalize on burden sharing. - Collaborate with FVEY partner nations through The Technical Cooperation Program to advance the science, methodologies, and tools of technology foresight analysis, model Defense systems, and explore the operational implications of technology application at the strategic, joint all domain level. - Execute a collaborative campaign of analysis strategy with Australia, identifying emerging technologies, forecasting technology trends through 2040, and characterizing technology superiority relative to common adversaries. - Leverage partner nations' unique S&T innovation ecosystem to identify opportunities for co-development and co-investment that will accelerate the exploration, acquisition, and integration of emerging technologies into defense portfolios. Intelligence Integration: - Continue to conduct formal technical exchanges between OUSD(R&E) stakeholders and IC subject matter expert to establish a common understanding of global technology developments. - Continue to coordinate IC support for OSI&A-sponsored technical analysis and independent comparative technology assessments and provide OSD-level support to S&T intelligence initiatives.			

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 0603288D8Z / *Science and Technology (S&T) Analytic Assessments*	**Project (Number/Name)** 177 / *Technology Watch/Horizon Scanning*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024	FY 2025
- Continue to direct the Defense Intelligence Enterprise to provide analytic input to OUSD(R&E)-defined critical intelligence needs and disseminate the IC response to OUSD(R&E) stakeholders. ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase of $0.858 million between FY 2024 and FY 2025 is the result of increased collaboration with international allies and partners.			
Accomplishments/Planned Programs Subtotals	7.108	6.993	7.866

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

N/A

D. Acquisition Strategy

N/A