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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2025 Office of the Secretary Of Defense **Date:** March 2024

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603375D8Z I <i>Technology Innovation</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	18.505	123.837	74.549	-	74.549	0.145	0.141	0.142	0.145	Continuing	Continuing
375: <i>Technology Innovation</i>	-	18.505	41.881	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
377: <i>Anomalous Incidents Research</i>	-	0.000	81.956	74.549	-	74.549	0.145	0.141	0.142	0.145	-	-

**Note**

New Start (Y/N): No

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

This program supports the Department's initiatives to Deter Strategic Attacks, Defend the Homeland, and Build a Resilient Joint Force and Defense Ecosystem.

In order to sustain technological superiority, the Department must take immediate advantage of the rapid evolution of emerging technologies that will be a source of battlefield advantage, when integrated with military systems and novel concepts of operation. This program focuses on rapidly moving these technologies to a Technology Readiness Level where they would then be ready to demonstrate in a prototyping or demonstration acceleration program to support warfighter needs. This funding is focused on supporting efforts within the Department's Critical Technology Areas that contribute to the broader joint mission needs.

The ability to react quickly to emerging technologies is critical to staying ahead of our adversaries. For example, from FY 2020 - FY 2022 this program was able to quickly take advantage of breakthroughs at DARPA in quantum technology and initiated a project developing higher maturity prototypes using this DARPA technology for the Services to integrate into applications.

Leveraging these technologies from both defense and commercial sources, to include non-traditional sources such as startup companies, has the potential to rapidly address warfighter problem sets in areas where commercial innovation outstrips government investment in the same technology areas.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	18.505	123.837	133.258	-	133.258
Current President's Budget	18.505	123.837	74.549	-	74.549
Total Adjustments	0.000	0.000	-58.709	-	-58.709
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	-58.859	-	-58.859
• Economic Assumptions	-	-	0.150	-	0.150

**Change Summary Explanation**

The decrease of \$58.859 million in FY 2025 is due to a realignment of \$22.468 million to Program Element 0603133D8Z to support advances in the National Defense Strategy goal of Building Enduring Advantages, \$33.271 million realignment to Program Element 0603000D8Z to support Start Energetics Leap Ahead, \$2.368 million realignment to Program Element 0606300D8Z to support Defense Science Board (DSB) directed study requirements; and a reduction of \$0.752 million in FY 2025 to meet DoD overall funding reductions, which were spread to mitigate impact. Funding increase of \$0.150 million in FY 2025 for Economic Assumptions.

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**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 0603375D8Z / <i>Technology Innovation</i>				Project (Number/Name) 375 / <i>Technology Innovation</i>			
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
375: <i>Technology Innovation</i>	-	18.505	41.881	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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

The Tech Innovation program focuses on rapid innovation and demonstration efforts to address priority warfighter problem sets and National Defense Strategy focus areas. The current effort is focused on development of atomic clocks and biotechnology to accelerate progress along the Quantum Science and the Biotechnology Department of Defense (DoD) Modernization priority roadmaps. Combatant Commanders and the Intelligence Community (IC) continue to receive information that adversaries are looking to disrupt our common networked tactical picture by deny our access to a common time through the Global Positioning System (GPS). Under this program, commercial companies will mature DARPA's investment in innovative atomic clocks with tri-service technical oversight, creating a prototype Next Generation Atomic Clock (NGAC) for commercial production. This program will also demonstrate emerging biotechnology advancements to stimulate additional investment in biotechnology that can address DoD needs. The anomalous health incidents (AHI) program focuses on research and development to determine the cause of AHI affecting government personnel at locations around the world. The National Security Council led efforts include multi-Service/multi-Agency Laboratory collaboration to assess bioeffects and causes of AHI.

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

	FY 2023	FY 2024	FY 2025
<p><b>Title:</b> Technology Innovation</p> <p><b>Description:</b> The program focuses rapid innovation and demonstration in emerging defense and commercial technology areas to address the National Defense Strategy technology focus areas and priority warfighter problem sets. Prior year projects included funding of promising commercial advanced technology demonstration projects in the areas of biotechnology, quantum science, fully networked command, control, and communications, and space.</p> <p><b>FY 2024 Plans:</b> Final NGAC design and critical design review will take place in FY 2024. Build of the prototype clock will commence thereafter.</p> <p>Demonstration of five biotechnology efforts started in FY 2023, including demonstration of biomagnets for low detectability of RF materials, Synbio food production at the point-of-need, biological automated collector/detector for expeditionary reconnaissance, probiotics for warfighter fatigue mitigation and biomanufacturing of synthetic proteins for non-lethal weapon applications. The program will also evaluate and select the next proposals for FY 2025 biotechnology projects.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The decrease of \$41.881 million is due to a realignment to Program Element 0603133D8Z to support advances in the National Defense Strategy goal of Building Enduring Advantages, Program Element 0603000D8Z to support Start Energetics Leap Ahead, and Program Element 0606300D8Z to support Defense Science Board (DSB) directed study requirements.</p>	18.505	41.881	-
<p><b>Title:</b> Anomalous Health Incidents (AHI)</p>	0.000	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2023	FY 2024	FY 2025
<b>Description:</b> The National Security Council led multi-Service/multi-Agency Laboratory collaboration will conduct research and development to determine the cause of AHI, in-depth bioeffects, and countermeasures. Will be executed out of P377, changes will be reflected in R-docs and Hyperion once Hyperion reopens.			
<b>Accomplishments/Planned Programs Subtotals</b>	18.505	41.881	-

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

**Remarks**  
N/A

**D. Acquisition Strategy**  
N/A

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<b>Appropriation/Budget Activity</b> 0400 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603375D8Z / <i>Technology Innovation</i>	<b>Project (Number/Name)</b> 377 / <i>Anomalous Incidents Research</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
<i>377: Anomalous Incidents Research</i>	-	0.000	81.956	74.549	-	74.549	0.145	0.141	0.142	0.145	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The program focuses on research and development to determine the cause of anomalous health incidents (AHI) affecting government personnel at locations around the world. The National Security Council led efforts include multi-Service/multi-Agency Laboratory collaboration to assess bioeffects and causes of AHI.

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

	FY 2023	FY 2024	FY 2025
<b>Title:</b> AHI	0.000	81.956	74.549
<b>Description:</b> The National Security Council led multi-Service/multi-Agency Laboratory collaboration will conduct research and development to determine the cause of AHI, in-depth bioeffects, and countermeasures.			
<b>FY 2024 Plans:</b> Continue multi-Agency/multi-Laboratory efforts to determine the cause of AHI with additional bioeffects testing and development of countermeasures.			
<b>FY 2025 Plans:</b> Using equipment and instrumentation purchased and the research capabilities developed in FY 2024, perform novel research and evaluate the scientific and physics basis for certain hypotheses related to plausible mechanisms associated with the AHI phenomenon. Develop enhanced bioeffects testing and continue development and testing of countermeasures.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The reduction of \$7.407 million between FY 2024 and FY 2025 was a decrease of \$6.805 million between FY 2024 and FY 2025 due to a realignment to PE 0603133D8Z, PE 0603000D8Z, and PE 0606300D8Z; a reduction of \$0.752 million in FY 2025 applied to meet DoD overall funding reductions, which were spread to mitigate impact; and an increase of \$0.150 for Economic Assumptions.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	81.956	74.549

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

N/A

**Remarks**

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**D. Acquisition Strategy**

N/A