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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Office of the Secretary Of Defense **Date:** April 2022

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0606135D8Z I <i>Chief Digital Artificial Intelligence Officer</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	13.132	-	13.132	17.247	9.243	5.464	5.672	Continuing	Continuing
069: <i>Artificial Intelligence & Machine Learning Technologies</i>	-	0.000	0.000	13.132	-	13.132	17.247	9.243	5.464	5.672	Continuing	Continuing

Note

New Start (Y/N): No

A. Mission Description and Budget Item Justification

This program supports the Department's initiatives to build enduring advantage and build a resilient Joint Force and defense ecosystem. On December 8, 2021, the Deputy Secretary of Defense (DSD) issued a memo establishing the Chief Digital and Artificial Intelligence Officer (CDAO) as the Department's senior official responsible for strengthening and integrating data, artificial intelligence, and digital solutions in the Department. The memorandum establishes the CDAO as the "successor organization to the Joint Artificial Intelligence Center (JAIC)". The CDAO reached Initial Operational Capacity (IOC) on February 1, 2022 and will integrate the JAIC, the Defense Digital Service (DDS), the Office of the Chief Data Officer (OCDO), and the Advancing Analytics (Advana) office from OUSD(Comptroller) as it approaches Full Operational Capacity (FOC) on June 1, 2022.

The integration of the JAIC, OCDO, DDS, and Advana into the CDAO more comprehensively restructures how the Department approaches the complex and dynamic challenges of becoming a digital, data, and Artificial Intelligence (AI) enabled enterprise capable of operating at the speed and scale necessary to accelerate the Department's adoption of data, analytics, and AI to preserve decision advantage.

The functions of the CDAO are as follows: lead and oversee DoD's strategy development and policy formulation for data, analytics, and AI; break down barriers to data and AI adoption; create enabling digital infrastructure and services; selectively scale and provide digital and AI-enabled solutions focused on enterprise and joint use cases; and surge digital services. This also requires CDAO to integrate the capabilities, personnel, resources, and governance of its constituent organizations, while concurrently sustaining momentum on priority projects that align to CDAO's mission. These include expanding the enterprise data repository; establishing a responsible AI ecosystem; developing the AI and Data Accelerator (ADA) initiative; and developing a Data, Analytics, and AI Adoption Strategy. These various lines of effort will support the overarching mission of accelerating the Department's adoption of data, analytics, and AI to preserve decision advantage across the Joint Force.

This exhibit encompasses two activities: AI Acquisition Training and Responsible AI (RAI) and AI Governance Tools.

The DoD must overhaul its acquisition processes and prioritize technical and acquisition training as highlighted in the 2018 National Defense Strategy, the 2018 DoD Artificial Intelligence Strategy, and the 2021 National Security Commission on Artificial Intelligence (NSCAI) Final Report. This funding will provide the basis of the training platform -Digital DNA Pilot Program- in partnership with OUSD(A&S).

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It is also incumbent on the Department to ensure all its AI-enabled systems will be safe and adhere to ethical standards and that they are used in a manner that contributes to the efficiency, effectiveness, and legitimacy of the Department’s AI capabilities. This requirement funds activities to develop, procure and maintain the necessary commercial and DoD-customized tools to put the DoD AI Ethical Principles into practice across the entire AI product lifecycle. RAI leaders across the Department are going to need access to and utilize tools that support the capability development process, including in areas of explainability of models, bias detection, and other areas necessary for RAI. This requirement provides for the integration of commercially available tools to include an Explainable AI tool, Synthetic Data & Anonymization tool, Data Management and Traceability tool, Continuous Integration/Continual Delivery tool, Auto-Machine Learning tool, Bias Mitigation tool, and the Interference Time tool into the Joint Common Foundation (JCF), which will embed the operationalization of the DoD AI Ethics Principles into the developer’s workflow. By doing so, these tools will not only provide technical assessments through the project lifecycle, but also allow for traceability and reliability to ensure safe and ethical systems from design to development and deployment to use. This requirement also funds the development of DoD-customized assessments and tools that RAI leads will use across the AI product and acquisition lifecycles.

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	13.132	-	13.132
Total Adjustments	0.000	0.000	13.132	-	13.132
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustment to the Budget Year	-	-	13.132	-	13.132

Change Summary Explanation

This exhibit will fund two new activities: AI Acquisition Training (\$6.695M), and RAI and AI Governance Tools (\$6.437M).

The DoD must overhaul its acquisition processes and prioritize technical and acquisition training as highlighted in the 2018 National Defense Strategy, the 2018 DoD Artificial Intelligence Strategy, and the 2021 NSCAI Final Report. This new growth funding will provide the basis of the training platform -Digital DNA Pilot Program- in partnership with OUSD(A&S).

It is also incumbent on the Department to ensure all its AI-enabled systems will be safe and adhere to ethical standards and that they are used in a manner that contributes to the efficiency, effectiveness, and legitimacy of the Department’s AI capabilities. This requirement funds activities to develop, procure and maintain the necessary commercial and DoD-customized tools to put the DoD AI Ethical Principles into practice across the entire AI product lifecycle. RAI leaders across the Department are going to need access to and utilize tools that support the capability development process, including in areas of explainability of models, bias detection, and other areas necessary for RAI. This requirement provides for the integration of commercially available tools to include an Explainable AI tool,

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Appropriation/Budget Activity
0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 6:
RDT&E Management Support

R-1 Program Element (Number/Name)
PE 0606135D8Z / *Chief Digital Artificial Intelligence Officer*

Synthetic Data & Anonymization tool, Data Management and Traceability tool, Continuous Integration/Continual Delivery tool, Auto-Machine Learning tool, Bias Mitigation tool, and the Interference Time tool into the JCF, which will embed the operationalization of the DoD AI Ethics Principles into the developer's workflow. By doing so, these tools will not only provide technical assessments through the project lifecycle, but also allow for traceability and reliability to ensure safe and ethical systems from design to development and deployment to use. This requirement also funds the development of DoD-customized assessments and tools that RAI leads will use across the AI product and acquisition lifecycles.

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Office of the Secretary Of Defense										Date: April 2022		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0606135D8Z / <i>Chief Digital Artificial Intelligence Officer</i>				Project (Number/Name) 069 / <i>Artificial Intelligence & Machine Learning Technologies</i>			
COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
069: <i>Artificial Intelligence & Machine Learning Technologies</i>	-	0.000	0.000	13.132	-	13.132	17.247	9.243	5.464	5.672	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project encompasses two activities: AI Acquisition Training and RAI and AI Governance Tools.

The DoD must overhaul its acquisition processes and prioritize technical and acquisition training as highlighted in the National Defense Strategy for 2018, the 2018 DoD Artificial Intelligence Strategy, and the 2021 NSCAI Final Report. This funding will provide the basis of the training platform -Digital DNA Pilot Program- in partnership with OUSD(A&S).

It is also incumbent on the Department to ensure all its AI-enabled systems will be safe and adhere to ethical standards and that they are used in a manner that contributes to the efficiency, effectiveness, and legitimacy of the Department’s AI capabilities. This requirement funds activities to develop, procure and maintain the necessary commercial and DoD-customized tools to put the DoD AI Ethical Principles into practice across the entire AI product lifecycle. RAI leaders across the Department are going to need access to and utilize tools that support the capability development process, including in areas of explainability of models, bias detection, and other areas necessary for RAI. This requirement provides for the integration of commercially available tools to include an Explainable AI tool, Synthetic Data & Anonymization tool, Data Management and Traceability tool, Continuous Integration/Continual Delivery tool, Auto-Machine Learning tool, Bias Mitigation tool, and the Interference Time tool into the JCF, which will embed the operationalization of the DoD AI Ethics Principles into the developer’s workflow. By doing so, these tools will not only provide technical assessments through the project lifecycle, but also allow for traceability and reliability to ensure safe and ethical systems from design to development and deployment to use. This requirement also funds the development of DoD-customized assessments and tools that RAI leads will use across the AI product and acquisition lifecycles.

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

	FY 2021	FY 2022	FY 2023
Title: Artificial Intelligence (AI) Acquisition Training	0.000	-	6.695
Description: The DoD must overhaul its acquisition processes and prioritize technical and acquisition training as highlighted in the National Defense Strategy for 2018, the DoD Artificial Intelligence Strategy for 2018, and the 2021 NSCAI Final Report. This funding is earmarked to provide the basis of the training platform - DoD AI Acquisition Training Platform - in partnership with OUSD(A&S).			
FY 2023 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>In FY 2023, CDAO plans to develop AI-specific acquisition content for existing Defense Acquisition University platforms and to build a DoD AI training portal for DoD components acquiring AI capabilities.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: The DoD must overhaul its acquisition processes and prioritize technical and acquisition training as highlighted in the 2018 National Defense Strategy, the DoD Artificial Intelligence Strategy for 2018, and the 2021 NSCAI Final Report. This new growth funding is earmarked to provide the basis of the training platform - DoD AI Acquisition Training Platform - in partnership with OUSD(A&S).</p>				
<p>Title: Responsible Artificial Intelligence (RAI) and Artificial Intelligence (AI) Governance Tools</p> <p>Description: It is incumbent on the Department to ensure all its AI-enabled systems will be safe and adhere to ethical standards and that they are used in a manner that contributes to the efficiency, effectiveness, and legitimacy of the Department's AI capabilities. This requirement funds activities to develop, procure and maintain the necessary commercial and DoD-customized tools to put the DoD AI Ethical Principles into practice across the entire AI product lifecycle. RAI leaders across the Department are going to need access to and utilize tools that support the capability development process, including in areas of explainability of models, bias detection, and other areas necessary for RAI. This requirement provides for the integration of commercially available tools to include an Explainable AI tool, Synthetic Data & Anonymization tool, Data Management and Traceability tool, Continuous Integration/Continual Delivery tool, Auto-Machine Learning tool, Bias Mitigation tool, and the Interference Time tool into the JCF, which will embed the operationalization of the DoD AI Ethics Principles into the developer's workflow. By doing so, these tools will not only provide technical assessments through the project lifecycle, but also allow for traceability and reliability to ensure safe and ethical systems from design to development and deployment to use. This requirement also funds the development of DoD-customized assessments and tools that RAI leads will use across the AI product and acquisition lifecycles.</p> <p>FY 2023 Plans: In FY 2023, CDAO Plans to develop and maintain the DoD AI Inventory tool and customized DoD governance tools, and to procure and maintain commercially available tools to support RAI activities.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: It is incumbent on the Department to ensure all its AI-enabled systems will be safe and adhere to ethical standards and that they are used in a manner that contributes to the efficiency, effectiveness, and legitimacy of the Department's AI capabilities. This new growth funds activities to develop, procure and maintain the necessary commercial and DoD-customized tools to put the DoD AI Ethical Principles into practice across the entire AI product lifecycle. RAI leaders across the Department are going to need access to and utilize tools that support the capability development process, including in areas of explainability of models, bias detection, and other areas necessary for RAI. This requirement provides for the integration of commercially available tools to include an Explainable AI tool, Synthetic Data & Anonymization tool, Data Management and Traceability tool, Continuous</p>		0.000	-	6.437

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2021	FY 2022	FY 2023
Integration/Continual Delivery tool, Auto-Machine Learning tool, Bias Mitigation tool, and the Interference Time tool into the JCF, which will embed the operationalization of the DoD AI Ethics Principles into the developer’s workflow. By doing so, these tools will not only provide technical assessments through the project lifecycle, but also allow for traceability and reliability to ensure safe and ethical systems from design to development and deployment to use. This new growth also funds the development of DoD-customized assessments and tools that RAI leads will use across the AI product and acquisition lifecycles.			
Accomplishments/Planned Programs Subtotals	0.000	-	13.132

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

N/A

Remarks

D. Acquisition Strategy

N/A