Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Defense Information Systems Agency											Date: March 2019	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*						R-1 Program Element (Number/Name) PE 0604532K *I Joint Artificial Intelligence Center (JAIC)*						

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	208.834	-	208.834	34.134	34.134	34.134	34.134	Continuing	Continuing
JA1: *Joint Artificial Intelligence Center (JAIC)*	-	0.000	0.000	208.834	-	208.834	34.134	34.134	34.134	34.134	Continuing	Continuing

A. Mission Description and Budget Item Justification

The JAIC was established to preserve and expand our military advantage in support of the Department's 2018 National Defense Strategy. As a primarily executing body it will accelerate the delivery of Artificial Intelligence (AI) enabled capabilities, scale the Department-wide impact of AI, and synchronize DoD AI activities to expand Joint Force advantages. The JAIC mission is to accelerate the delivery of AI to achieve impact scaled across the DoD at relevant speed to transform the DoD and ensure the nation maintains a competitive advantage. JAIC capitalizes on Project Maven's efforts as the pathfinder AI initiative for the DoD to further critical AI architecture and prototyping to rapidly expand AI to other mission areas. As JAIC efforts prove relevant, they will expedite technology transition from the laboratory to operational use, and increase Joint Force capability. Most military data storage, utilization, and analytic tools and systems were designed pre-AI and require specialized integration to enable the insertion of algorithms into their software baseline. JAIC capabilities are commercial technology initiatives that insert commercial AI into existing programs of record.

JAIC will execute an initial sequence of cross-functional use cases to demonstrate value and create momentum, called National Mission Initiatives (NMI). NMIs will rapidly develop and deploy AI across the Joint Force for selected high-priority, pressing operational or business reform challenges. Additionally, JAIC will work closely with individual components to help identify, shape, and accelerate component-specific AI deployments, called Component Mission Initiatives (CMI). Both NMI and CMI efforts will include selecting commercial and academic partners for prototypes, and develop standardized processes with respect to data, testing and evaluation, and cybersecurity. JAIC will use lessons learned from these initial projects to establish new processes and standards that will be repeatable across additional projects and immediately relevant to the Joint Force. This will be done in collaboration with partners across technology companies, consulting firms, academia, government labs, Federally Funded Research and Development Centers (FFRDC), services, and international partners.

To support the National Defense Strategy (NDS), the JAIC will catalyze and develop AI capabilities to enhance readiness and lethality and ensure DoD maintains an advantage over adversaries. JAIC will spearhead this unique opportunity to expand the competitive space across all domains with AI. JAIC efforts will directly contribute to increased military readiness towards a more lethal Joint Force, it will strengthen alliances and attract new partners by focusing on global problems, and it will enable Departmental reform to increase performance and affordability. JAIC will cultivate workforce talent by recruiting, developing, and retaining high-quality personnel to enable the development and delivery of AI. This will bring critical skills into the department by drawing outside expertise, and leveraging small companies, start-ups, and universities. Implementing AI at a speed of relevance hinges on the ability to integrate AI better than our adversaries, and the JAIC will enable the Department to adapt AI into how it fights. JAIC will focus on speed of delivery, continuous adaptation, and frequent capability delivery sprints. To fully realize this potential, the JAIC will pioneer AI approaches across the full scale of the global enterprise in a manner that is jointly interoperable with allies, partners, military Services, and agencies. Specifically, JAIC will identify and implement new organizational approaches, establish key AI building blocks and standards, develop and attract AI talent, and introduce new operational models that will enable DoD to systematically take advantage of AI at enterprise scale. The JAIC will fulfill the National Security Strategy and NDS to ensure conventional overmatch through dual-use commercial technology and partnered DoD-developed AI. The JAIC will collaborate with non-

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2020 Defense Information Systems Agency	**Date:** March 2019
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0604532K *I Joint Artificial Intelligence Center (JAIC)*

governmental organizations, corporations, strategic influencers, and partners and allies. JAIC will seize the initiative to lead the world in the development and adoption of transformative defense AI solutions that are safe, ethical, and secure. JAIC will spearhead this effort, engaging with the best minds in government, the private sector, academia, and international community.

B. Program Change Summary ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	208.834	-	208.834
Total Adjustments	0.000	0.000	208.834	-	208.834
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustment	-	-	208.834	-	208.834

Change Summary Explanation

Increase of +$208.834 is due to the functional transfer of JAIC from DoD CIO to DISA.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency										Date: March 2019	

Appropriation/Budget Activity 0400 I 7				R-1 Program Element (Number/Name) PE 0604532K I Joint Artificial Intelligence Center (JAIC)						Project (Number/Name) JA1 I Joint Artificial Intelligence Center (JAIC)	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
JA1: Joint Artificial Intelligence Center (JAIC)	-	0.000	0.000	208.834	-	208.834	34.134	34.134	34.134	34.134	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Defense Information Systems Agency		**Date:** March 2019
Appropriation/Budget Activity 0400 *I* 7	**R-1 Program Element (Number/Name)** PE 0604532K *I Joint Artificial Intelligence Center (JAIC)*	**Project (Number/Name)** JA1 *I Joint Artificial Intelligence Center (JAIC)*

governmental organizations, corporations, strategic influencers, and partners and allies. JAIC will seize the initiative to lead the world in the development and adoption of transformative defense AI solutions that are safe, ethical, and secure. JAIC will spearhead this effort, engaging with the best minds in government, the private sector, academia, and international community.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2018	FY 2019	FY 2020
Title: Joint Artificial Intelligence Center (JAIC)	0.000	-	208.834

Description: JAIC develops, tests, prototypes and demonstrates innovative AI, Machine Learning (ML), data infrastructure, and model/algorithm test and assessment capabilities to integrate AI capabilities across numerous domains and technical areas including maintenance and supply chain, personnel recovery, infrastructure assessment, geospatial monitoring during disaster, and cyber sense making. JAIC develops and evaluates integrated prototype technologies in realistic operating environments with DoD entities to assess the performance or cost reduction potential of applying such advanced technology to scale across multiple services. JAIC does this by aligning rapid prototype projects under NMIs and leverages existing commercial technology for DoD use, built upon a common architecture that enables the DoD to rapidly scale AI capability.

FY 2020 Plans:
JAIC will build a new NMI, Cyber Sense-making. The new NMI will provide artificial intelligence to the Cyber Mission Force to enable enterprise-scale sensemaking for cyberspace operations. Advanced adversarial Cyber actors infiltrate and operate undetected within the DoD Information Network (DODIN). Operating numerous disparate tools and processing the avalanche of data exceeds human cognitive ability for warfighters to detect and understand adversary activity. This hinders military operations, diminishes the security posture of the DODIN, and potentially compromises national strategic assets. Cyberspace operators and security professionals rely on static signature and rule based techniques combined with manual data correlation processes to detect known threats in the DODIN. They leverage disparate commercial and open source software to enumerate friendly Cyber terrain resulting in a myopic view of the Cyber environment. Due to the dynamic, contested, and congested nature of the DODIN, these capabilities fail to adequately integrate information to provide a Cyberspace Common Operating Picture. Currently, the Cyber Mission Force requires significant man-hours to manage, with varying degrees of success: detect advanced cyber threats in real time, identify adversarial use of compromised accounts, identify novel threat activity, and categorize user behavior trends and anomalies to detect adversary use of compromised accounts. Additionally, overall NMI efforts will augment current network mapping tools to accelerate and enrich Cyber terrain enumeration and improve situational awareness. Finally, this NMI will increase automation in malware and event detection/response to improve human sensing and optimize decision making to apply human judgement where it is most needed and apply machines to do repetitive analysis.

Rapid prototyping models will be developed to detect adversary use of compromised accounts; to understand the DODIN networks and system malware/event detections; and to enhance network mapping. These actions will decrease the time and human effort it currently takes to conduct such cyber efforts, while increasing the accuracy and effectiveness of such efforts at the speed of machine computing. It will return the cognitive bandwidth of cyber defense operators and allow them to better maintain

Exhibit R-2A, **RDT&E Project Justification:** PB 2020 Defense Information Systems Agency		**Date:** March 2019
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B. Accomplishments/Planned Programs ($ in Millions)	**FY 2018**	**FY 2019**	**FY 2020**
awareness of, and exercise judgement in the cyber realm. This NMI will increase DODIN security, safeguard sensitive information, and give crucial time back to decision makers who can focus on strategic analysis and response, rather than making sense of adversaries' actions and deterring them. ***FY 2019 to FY 2020 Increase/Decrease Statement:*** The increase of +$208.834 from FY 2019 to FY 2020 is due to the functional transfer of JAIC from DoD CIO to DISA.			
Accomplishments/Planned Programs Subtotals	0.000	-	208.834

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

D. Acquisition Strategy

 The JAIC acquisition, management, and contracting strategy follows guidance outlined in the DoD 5000 series directives, Federal Acquisition Regulation (FAR) and FAR supplement policies and procedures. Management uses project management tools and meetings to ensure delivery of stated capabilities and performance criteria.

E. Performance Metrics

 JAIC performance metrics are measured through internal management controls and external assessments. Performance metrics include, but are not limited to time, money, realism, fidelity, and transition as defined below:
 • Time – Enable the warfighter to execute processes faster than current capabilities allow. This includes the ability to process more, or higher levels of relevant knowledge and apply human cognitive capital to higher order judgments on a faster pace than previously capable.
 • Money – Enable the warfighter to reduce duplication of effort and to prepare and execute events at a more effective and efficient cost than current capabilities allow. This includes finding efficiencies in system lifecycle management, supply chain, replacement and repair, and more accurate requisitions, saving critical limited fiscal resources to be applied appropriately.
 • Realism – Enable the warfighter to create an environment that is closer to the real world environment than current capabilities allow.
 • Fidelity – Ensure unity of effort throughout the Department and external stakeholders for national imperative focus areas, while catalyzing and accelerating AI capabilities beyond what was previously projected to be accomplished during that time period.
 • Transition – Select projects that have the greatest likelihood of adoption and transition to operational capabilities.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Defense Information Systems Agency		Date: March 2019

Appropriation/Budget Activity 0400 I 7	R-1 Program Element (Number/Name) PE 0604532K I Joint Artificial Intelligence Center (JAIC)	Project (Number/Name) JA1 I Joint Artificial Intelligence Center (JAIC)

Product Development ($ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/Various	TBD : TBD	-	-		-		208.834	Mar 2020	-		208.834	Continuing	Continuing	-
Subtotal			-	-		-		208.834		-		208.834	Continuing	Continuing	N/A

	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-	0.000	208.834	-	208.834	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency			Date: March 2019
Appropriation/Budget Activity 0400 *I* 7		**R-1 Program Element (Number/Name)** PE 0604532K *I Joint Artificial Intelligence Center (JAIC)*	**Project (Number/Name)** JA1 *I Joint Artificial Intelligence Center (JAIC)*

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Joint Artificial Intelligence Center (JAIC)																												
Joint Artificial Intelligence Center (JAIC)									████																			████

Exhibit R-4A, **RDT&E Schedule Details:** PB 2020 Defense Information Systems Agency		**Date:** March 2019
Appropriation/Budget Activity 0400 *I* 7	**R-1 Program Element (Number/Name)** PE 0604532K *I Joint Artificial Intelligence Center (JAIC)*	**Project (Number/Name)** JA1 *I Joint Artificial Intelligence Center (JAIC)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint Artificial Intelligence Center (JAIC)				
Joint Artificial Intelligence Center (JAIC)	2	2020	4	2024