STATEMENT BY

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ON

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Good afternoon Ms. Chairwoman, Ranking Member, and distinguished Members of the Subcommittee. I thank you for the opportunity to spend a few minutes on the establishment of our Joint Artificial Intelligence Center (JAIC), an effort that is of great importance to the Department of Defense and to our country, in a technology area that is profoundly significant to industry, academia, and society writ large.

I am Dana Deasy, the Department of Defense (DoD) Chief Information Officer (CIO). I am the principal advisor to the Secretary of Defense for information management, IT, cybersecurity, communications, positioning, navigation, and timing (PNT), spectrum management, and senior leadership and nuclear command, control, and communications (NC3) matters. I am also responsible for the success of the Department's new Joint AI Center. Several of these responsibilities are clearly unique to the DoD, and my imperative as the CIO in managing this broad and diverse set of functions is to ensure that the Department has the information and communications technology capabilities needed to support the broad set of Department missions. This includes supporting our deployed forces, cyber mission forces, as well as those providing mission and business support functions.

Artificial intelligence (AI) is rapidly changing a wide range of businesses and industries. It is also poised to change the character of the future battlefield and the pace of threats and capabilities we must face. The 2018 National Defense Strategy (NDS) foresees that ongoing advances in AI "will change society and, ultimately, the character of war." Structurally, we know AI has the potential to be an enabling layer across nearly everything -- that means countless applications in industry and everyday life, and it means the opportunity to positively transform every corner of the Department, from innovative concepts that change the way we fight, to improvements in the way we maintain our equipment, perceive our environment, train our men and women, defend our networks, operate our back office, provide humanitarian aid and respond to disasters, and more. The adoption of AI in defense enables us to better support and protect American servicemembers, safeguard our citizens, defend our allies, and improve the affordability, effectiveness, and speed of our operations.

Other nations, particularly China and Russia, are making significant investments in AI for military purposes. These investments threaten to erode our technological and operational advantages and destabilize the free and open international order. The Department of Defense, together with our allies and partners, must adopt AI to maintain its strategic position, prevail on future battlefields, and safeguard this order.

Under the NDS, the Department will accelerate the adoption of AI to expand our military advantages and create a force fit for our time. AI will enhance operational effectiveness, improve readiness, and increase efficiency in the general business practices of the Department. As we move out, we will make concerted effort to move AI technologies in a direction that improves our odds of security, peace, and stability in the long run by promoting vigorous dialogue and multilateral cooperation on the safe and ethical use of AI for national security and establishing new norms for responsible behavior, consistent with the law and our nation's values. This AI transformation will ensure that we maintain the ability to execute the Department's vital mission of protecting the security of our nation, deterring war, and preserving peace.

Last June, Deputy Secretary Shanahan directed my office to establish the Joint AI Center. This is a new unit whose goal is to accelerate the delivery of AI-enabled capabilities, scale the Department-wide impact of AI, and synchronize the Department's AI activities. In parallel, the Department submitted its first AI Strategy to Congress, an annex to the NDS that captures the integrated set of decisions we are making now to harness AI to advance our security and prosperity. The founding of JAIC also dovetailed Section 238 of the FY19 National Defense Authorization Act, which directed a joint approach to coordinate the efforts of the Department to develop, mature, and transition AI technologies into operational use. Today, I will provide you with an update on the establishment of JAIC. I will touch on how we are partnering with Research & Engineering (R&E), the role of the Military Services, the Department's initial focus areas for AI delivery, and how JAIC is supporting whole-of-government efforts in AI.

JAIC will operate across the full AI application lifecycle, emphasizing near-term execution, experimentation, and operational adoption to meet current needs. JAIC's work will complement the efforts of R&E, which are focused on foundational research, longer-term technology creation, and innovative concepts. You will hear JAIC communicate a clear and consistent message about transforming DoD through AI. This refers to the transformation that happens when you field technology on operationally-relevant timelines, enable men and women to experiment with it based on their own creativity, and ultimately generate new ways of working that solve our most critical challenges and expand our military strength. As we move to rapidly incorporate AI, those men and women in America's military will remain our enduring source of strength; we will use AI-enabled information, tools, and systems to empower, not replace, those who serve.

To derive maximum value from AI application throughout the Department, JAIC will operate across an end-to-end lifecycle of problem identification, prototyping, integration, scaling, and support. JAIC will partner with the Services and other components across the Joint Force to systematically identify, prioritize, and select new AI mission initiatives, and then stand up cross-functional teams to rapidly execute a sequence of use cases that demonstrate value and spur momentum. This includes engaging with leading commercial and academic partners for prototypes, fostering new forms of experimentation, and employing standardized processes with respect to areas such as data management, testing and evaluation, and cybersecurity. Our approach has been directly informed by the Department's AI pathfinder activity, Project Maven, which has been successful in identifying and beginning to address key challenges with integrating AI into operations and has put in place an initial set of data, tools, and infrastructure for AI delivery, as well as initial templates for acquisition, testing and evaluation, operational assessment, and more.

JAIC's early projects serve a dual purpose: to deliver new AI-enabled capabilities to end users as well as to help incrementally develop the common foundation that is essential for scaling AI's impact across DoD. This foundation includes shared data, reusable tools, frameworks, libraries, and standards, and AI cloud and edge services. JAIC will work with teams throughout the Department to ensure that they can leverage this foundation to accelerate their progress in a manner that aligns with DoD enterprise cloud adoption. Let me underscore that point: our enterprise approach for AI and enterprise cloud adoption via the DoD-wide Cloud Strategy are mutually reinforcing, mutually dependent undertakings. Finally, JAIC will provide ongoing

support to the efforts of the Services and other organizations to ensure continuous improvement, assessment, and sustainment of AI systems and solutions across the enterprise.

The AI capability delivery efforts that will go through this lifecycle will primarily fall into two categories: National Mission Initiatives (NMIs) and Component Mission Initiatives (CMIs). As outlined in the DoD AI Strategy, a National Mission Initiative (NMI) is a pressing operational or business reform joint challenge, typically identified from the National Defense Strategy's key operational problems or nominated by a mission owner, which can only be solved by multi-service innovation, coordination, and the parallel introduction of new technology and new operating concepts. NMIs are typically driven by JAIC and are executed by cross-functional teams that are comprised of both JAIC personnel as well as subject matter experts from across the Department on a rotational basis. Execution of these projects will be essential for putting in place our initial common foundation.

The second project category is a Component Mission Initiative (CMI), which is a component-level challenge that can be solved through AI. JAIC will work closely with individual components on CMIs to help identify, shape, and accelerate their component-specific AI deployments through usage of common foundational tools, libraries, cloud infrastructure, etc., application of best practices, partnerships with industry and academia, etc. The component will be responsible for identifying and implementing the organizational structure required to accomplish its project in coordination and partnership with JAIC.

We are already forming strong partnerships with the Services and key components: for example, the Army established a new AI Task Force that is working closely with JAIC on predictive maintenance, we are actively engaged in an effort to apply data-driven insights to equipment availability at U.S. Special Operations Command and in the U.S. Air Force in partnership with Defense Innovation Unit (DIU), and we are partnering with U.S. Cyber Command to shape a new mission initiative together. These early efforts each make use of common approaches to data, tools, libraries, architectures, development approaches, and more. Additionally, we are already seeing encouraging signs that the Services are increasing their levels of investment in AI-related capabilities; this is exactly what we want to see happen.

JAIC's focus on near-term AI implementation and adoption complements efforts within the Office of the Under Secretary of Defense for Research and Engineering (R&E), at places such as the Defense Advanced Research Projects Agency (DARPA) that are focused on the next wave of AI research and longer-term technology creation. When it comes to research for the future versus the ability to apply it now at scale, DoD needs the best of both, and they feed one another: R&E will feed JAIC with updates on leading-edge AI technologies and concepts, and JAIC will provide R&E insights from operational fielding, user feedback, and data. Dr. Griffin, Dr. Porter, and I have a shared vision on this enterprise approach. JAIC is already working with DIU, DARPA, and the Strategic Capabilities Office to improve integration and enhance unity of effort on current and future AI projects.

Last week, I gave the opening remarks at the DoD AI Industry Day, an event put together through a partnership among JAIC, Project Maven, and the Army Research Lab, with strong participation from several other DoD components as well as attendance from a few HASC staff

members. I shared with the nearly 400 companies in attendance that we had achieved a significant milestone: JAIC is now up and running, and open for business. Examples of early mission initiatives include the following:

- **Perception –** Improve the speed, completeness, and accuracy of Intelligence, Surveillance, Reconnaissance Processing, Exploitation, and Dissemination. Project Maven's efforts will be included here.

- **Predictive Maintenance (PMx)** – Provide computational tools to decision makers to help them better forecast, diagnose, and manage maintenance issues to increase availability, improve operational effectiveness, and ensure safety, at reduced cost.

- **Humanitarian Assistance/Disaster Relief (HA/DR)** – Reduce the time associated with search and discovery, resource allocation decisions, and executing rescue and relief operations to save lives and livelihood during disaster operations.

- **Cyber Sensemaking** – Detect and deter advanced adversarial cyber actors who infiltrate and operate within the DoD Information Network (DoDIN) to increase DoDIN security, safeguard sensitive information, and allow warfighters and engineers to focus on strategic analysis and response.

We picked these initiatives to deliver mission impact at speed, demonstrate the proof of concept for the JAIC operational model, enable rapid learning and iterative process refinement, and build out our library of reusable tools while validating our enterprise cloud architecture. As did Project Maven, these efforts will benefit us by growing more AI expertise that will return to the Services and components to help accelerate their own AI projects.

For the predictive/preventive maintenance NMI, we are starting with Army and Army Special Operations helicopters (H-60s). There is sufficient data available to train algorithms, there will be well-defined return on investment criteria, and this project helps address Secretary Mattis' direction to the Services to improve their maintenance readiness rates. We anticipate moving to other airframes and vehicles once the H-60 project is well underway, working closely with DIU to scale the promising results they have demonstrated using AI for predictive maintenance on other Air Force and Army platforms.

For the humanitarian assistance and disaster relief (HA/DR) NMI, we are already applying lessons learned and reusable tools from Project Maven to field AI capabilities in support of events such as hurricanes and wildfires, disasters in which DoD plays a supporting role. One of the most important benefits of this NMI is that it is an inspiring, societally-beneficial, life-saving mission that is not only whole-of-government but whole-of-society. It brings in interagency, state and local governments, non-governmental organizations, allied and partner nations, and more. It offers a unique opportunity to combine DoD efforts with industry and academia in a new type of public-private endeavor to operationalize AI to solve our most challenging problems. Doing this at scale to address disasters on an integrated basis creates the potential to both save lives and livelihood as well as advance common tools, lessons, and partnerships for the benefit of many DoD missions.

While its primary focus is delivery initiatives such as these, JAIC has an important role in synchronizing DoD AI activities. This avoids duplication and excess cost, fosters sharing of lessons, and establishes a new enterprise approach for translating AI into decisions and impact at scale across the Joint Force. Under my CIO authorities and as laid out in the JAIC establishment memo, JAIC will coordinate all DoD AI-related projects above $15 million. This does not mean that JAIC will control the execution of these projects or the funding for Service- and component-level AI initiatives. It does mean that we will start to ensure, for example, that they begin to leverage common tools and libraries, manage data using best practices, reflect a common governance framework, adhere to rigorous testing and evaluation methodologies, and comply with architectural principles and standards that enable scale. Over time, when properly resourced, JAIC will assume a greater role with regard to component AI programs.

JAIC will be a key resource for whole-of-government efforts in AI, particularly as we explore as a Nation the opportunities and challenges associated not merely with fundamental AI research, but also with translating the technology into decisions and impact in operations. To underscore our focus on ethics, humanitarian considerations, and both short-term and long-term AI safety, JAIC is working closely today with the Defense Innovation Board (DIB) to foster a broad dialogue and provide input into the development of AI principles for defense. We are offering our perspective on the crucial research and development associated with operationalizing AI today in our engagements with the important work of the National Science and Technology Council Select Committee on AI. And I want to emphasize the importance of our partnerships with Congress in all areas, but with a particular focus on AI. The establishment of the National Security Commission on Artificial Intelligence in the National Defense Authorization Act for Fiscal Year 2019 is one key example of this partnership and an encouraging step forward.

The ingredients for JAIC to ultimately be successful include: enterprise cloud adoption; world-class AI talent, particularly in areas that are scarce within DoD today such as data engineering, data science, machine learning, and product management; a workforce that is taking steps to become broadly AI-ready; strong partnerships with the Services, Combatant Commands, and other key components; a tight two-way integration with the critical work of R&E; and energetic, combined problem-solving enabled by bonds of trust with AI leaders in industry and academia. The final ingredient for success is culture: specifically, the need for a cultural shift to become a more data-centric, computer science-literate, experimentation-driven organization that is comfortable deriving advantage from risk. These are the table stakes in AI. Our legacy culture and processes are particularly apparent as we launch what can only be described as a startup within the Department of Defense. As we do so, we are incorporating lessons learned from other Department activities that resembled startups in how they responded to urgent, compelling requirements across the Department – such as the ISR Task Force, Joint Improvised Explosive Device Defeat Organization, and Project Maven.

The central challenge laid down by the NDS is preserving and expanding our military advantage. In the era of AI, our ability to do this depends on our ability to integrate the technology on operationally-relevant timelines and adapt new ways of working.

The Joint AI Center will play a critical role in this transformation through the activities I have described: Delivering capability at speed to address key missions; establishing a common foundation for scaling AI's impact across the Joint Force, including shared data, reusable tools, frameworks and standards, and cloud and edge services; facilitating AI plans, policies, and standards, including those that ensure we lead the world in the development of AI solutions that are robust, ethical, and secure; and attracting and cultivating expertise in the form of a world-class AI team and an AI-ready workforce. The speed and scale of the change required is daunting, but we must embrace it if we are to reap the benefits of continued security and prosperity for the future.

Thank you for the opportunity to testify this afternoon. I look forward to continuing to work with Congress in this critical area, in an ongoing dialogue on our progress in AI adoption and the ways in which JAIC is being used to accelerate that progress. I look forward to your questions.

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Chief Information Officer

Mr. Dana Deasy is the Department of Defense Chief Information Officer (DoD CIO). He is the primary advisor to the Secretary of Defense for matters of information management, information technology, and information assurance, as well as non-intelligence space systems, critical satellite communications, navigation and timing programs, spectrum, and telecommunications.

Mr. Deasy previously held several private sector senior leadership positions, most recently as Global Chief Information Officer (CIO) of JPMorgan Chase. There, he was responsible for the firm's technology systems and infrastructure across all of the firm's businesses worldwide. Mr. Deasy managed a budget of more than $9 billion and over 40,000 technologists supporting JPMorgan Chase's Retail, Wholesale and Asset Management businesses. He has more than 35 years of experience leading and delivering large scale IT strategies and projects, to include Chief Information Officer and Group Vice President at BP.

Earlier in his career, Mr. Deasy served as CIO for General Motors North America, Tyco International, and Siemens Americas. He also held several senior leadership positions at Rockwell Space Systems Division, including as Director of Information Management for Rockwell's space shuttle program. He was inducted into the CIO Hall of Fame in 2012 and the International Association of Outsourcing Professionals Hall of Fame in 2013 and also named Transformational CIO in 2017.