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Chairman Bacon, Ranking Member Khanna, and distinguished members of this subcommittee, thank you for the opportunity to testify today. Today is my first appearance before Congress as the Department of Defense (DoD) Chief Digital and Artificial Intelligence Officer (CDAO), and I'm glad to be alongside our DoD Chief Information Officer (CIO) to communicate our shared commitment and efforts in modernizing the Defense Digital Enterprise.

My education, assignments and experience have been curated as a development pathway to serving in this capacity, from my experience as one of the first graduates in Computer Engineering from the United States Military Academy, to standing up the Capabilities Development Group in USCYBERCOM as Deputy Director, and later, founder of the US Army's Artificial Intelligence Integration Center. I'm fortunate to bring the best practices and lessons learned from prior roles to enhance, accelerate, and scale the application of data, analytics, and AI for the Department of Defense to the national security mission.

My testimony today will outline how our team is accelerating the DoD's adoption of data, analytics, and artificial intelligence (AI). This testimony highlights our key lines of effort, aligned with the DoD Data, Analytics, and AI Adoption Strategy and the Secretary of Defense's directives to revive the warrior ethos, rebuild military readiness, and re-establish deterrence through improved joint warfighting capabilities.

We recognize that we are in an era where information advantage is decisive as kinetic power. The DoD's Data, Analytics, and AI Adoption Strategy provides the roadmap for how we develop and deploy these technologies to gain superiority. In practical terms, this means transforming the DoD into a data-driven organization where timely, trusted information and AI-powered insights support every level of operation.

Crucially, this transformation is how we build "Peace Through Strength" and allow the warfighter to readily and rapidly field these fundamentally necessary technologies. Modernizing our digital and AI capabilities is not a tech exercise for its own sake, but directly underpins a more lethal, agile, and resilient joint force. I frame every initiative undertaken by the Department by the question: "How does this enable our defense capabilities and strengthen U.S. deterrence?"

CDAO APPROACH AND EVOLUTION

As the Department recognized the significant changes in the digital domain (with value-added input from Congressional oversight), several disparate initiatives were instantiated, such as the Defense Digital Service, the Joint AI Center, Advana, and the Chief Data Officer. These efforts were able to provide several key contributions. However, the dynamics evident in enabling foundational changes to capabilities clearly required coordination across these efforts to achieve a digitally relevant tempo, and the Department combined all of them to create the Office of the Chief Digital and AI Officer. Following the establishment of the CDAO, the primary efforts were to identify gaps and seams and streamline efforts to support force providers gaining access to current data/AI solutions to enable necessary capabilities. While progress has been made in this space, it is evident that our competitors and advisories have increased the rate of development and adoption as well.

As I join the Department, the CDAO executes two critical, Congressionally-defined, roles and authorities on behalf of the Secretary of Defense: DoD Chief Data Officer (CDO) and DoD Chief Artificial Intelligence Officer (CAIO). CDAO implements these authorities through both its traditional policy, governance, and oversight functions as a Principal Staff Assistant (PSA), as

well as through its unique resourcing, acquisition, and capability delivery functions, which Congress provided to CDAO and/or its predecessor organizations to accelerate the delivery of data, analytics, and AI capabilities to DoD users.

This unique combination of authorities and functions has allowed CDAO to drive DoD adoption of data and AI not only through policy direction, but through the tangible delivery of more efficient, interoperable, and scalable enterprise data, analytics, and AI capabilities that currently support more than 100,000 DoD users involved in decision making across DoD business and warfighting missions. These capabilities implement digital best practices, including agile and iterative software development driven by user feedback; open interfaces that allow third party developer access to DoD data; and enterprise tool suites that allow self-service analytics and AI implementation.

As we manage these capabilities, we learn where barriers to adoption still exist. We then address those challenges through our CDO/CAIO policy and governance authorities, as well as through our organic acquisition authority, which allows us to leverage the full set of flexible acquisition authorities Congress gave DoD to create new approaches to delivering digital capabilities in more agile and timely ways. CDAO can move fast, and we do. We intentionally use prototyping and experimentation to quickly learn what commercial capabilities best solve DoD problems; what business models are most useful for DoD to scale and sustain efficient and interoperable solutions for the Joint force; and what policy, process, or cultural barriers need to be removed to repeat innovation across all levels of the Department.

We describe our approach to accelerating DoD data and AI adoption through the phases of enable, speed, and scale:

- **Enable:** enables the DoD's adoption of data, analytics, and AI by setting the right frameworks and pathways. This includes establishing standards, best practices, and reusable tools, as well as defining streamlined acquisition pathways to deliver capabilities directly to DoD users.

- **Speed:** prioritizes speed by investing in the necessary talent and infrastructure to develop and field data/AI solutions on accelerated timelines.

- **Scale:** plans for scale from day one, focuses on building solutions and architectures at echelon that are technically sound, secure, and work across the breadth of the Department.

Our combination of authorities and functions – implemented to enable, speed, and scale adoption – positions CDAO well to execute recent White House and Office of Management and Budget guidance on AI. These directives drive agencies to utilize AI in a more consistent manner while leveraging a competitive American market for procurement. They direct agencies to remove barriers to innovation, empower AI leaders to accelerate responsible AI adoption, and ensure AI works for the American people. As CAIO, CDAO is leading DoD implementation of this guidance, to include, but not limited to, developing a DoD AI strategy that removes barriers to AI adoption, leading the CDAO Council within the Department to ensure effective governance of AI, facilitating the data sharing, and implementing minimum risk management practices for high-impact AI.

CDAO Lines of Effort

CDAO accelerates capability delivery, sets the foundation for scale, and facilitates DoD adoption of digital tools by bringing in the best that the commercial sector has to offer. For DoD users to adopt innovative software from commercial industry, companies must have access to four key DoD resources:

- Access to DoD contracts
- Authority to operate on DoD networks and infrastructure
- Connections to authoritative DoD data
- Ongoing feedback from DoD users on how to design and improve software over time

These keys are rarely executed by the same organization, forcing companies to navigate a maze of bureaucracy. CDAO is creating processes and pathways to streamline and accelerate access to these key areas, making it easier for non-traditional companies to work with DoD.

IMPROVING ACCESS TO DOD CONTRACTS FOR DIGITAL AND AI INNOVATION

One of the first barriers CDAO identified to accelerating AI adoption was the difficulty companies, especially non-traditional defense tech firms and start-ups, face in navigating DoD contracting. If the Department wants the best AI tools and analytics, we must make it easier for cutting-edge suppliers to do business with the Department.

- **Reforming Acquisition Pathways:** The CDAO has rolled out new acquisition pathways tailored for software and AI. We've made use of flexible authorities granted by Congress, such as Other Transaction Agreements (OTAs) and the Middle Tier Acquisition pathway, to bypass lengthy procurement cycles and get capabilities in the hands of users faster. For example, through our "Tradewinds" initiative, which is a streamlined contracting vehicle purpose-built for AI and digital technology, we have created a virtual marketplace where vendors can more easily compete and collaborate on DoD AI projects. Tradewinds has onboarded hundreds of companies (including many small businesses and hubs of innovation) and has cut award timelines from what used to be 12+ months to a few months or even weeks in some cases. This means a machine learning tool developed in Silicon Valley or Austin can be contracted and brought into a pilot with an operational unit on greatly accelerated timelines. Additionally, Tradewinds offers other decentralized ordering vehicles, AI acquisition literacy educational content, and AI-enabled tools to enhance the DoD's acquisition missions.

- **Alignment with Guidance:** These contracting improvements also lead-turn the Secretary's call to "reform our acquisition process" and "rapidly field emerging technologies." By reviving our defense industrial base and engaging new innovators, we strengthen the techno-industrial competitiveness of our military. The Committee's bipartisan support for acquisition reform has been vital. From pilot programs in past NDAAs to the flexibility provided for software acquisitions, we are using those authorities to the fullest. We are also aligning with recent administration policy through OMB Memo M-25-22 that updates guidance for federal procurement of AI systems, emphasizing standards for risk management and contractor accountability in AI. The CDAO is incorporating this guidance so that our contracts not only move faster, but also sequence requirements, like cybersecurity, in a timely manner.

The DoD certainly has more to do, but momentum is positive. Contracts for data analytics and AI are up, cycle times are down, and many new vendors are contributing to our mission. With Congress's continued support, we will further open the pipeline for innovation to flow into the Department at the speed of need.

ACCELERATING AUTHORITIES AND PERMISSONS ON DOD NETWORKS

Our second line of effort addresses the bureaucratic and technical hurdles that slow down the deployment of digital solutions on DoD networks and infrastructure. Simply put, even the best software or AI tool cannot help our warfighters if it takes 18 months to approve for use on a DoD system or if it cannot connect to the data it needs. The CDAO, working closely with the DoD CIO, is tackling these hurdles so that we can field and update capabilities at the "speed of war."

- **Streamlining the "Authority to Operate" (ATO) Process:** We have initiated a major push to streamline the ATO process for software, including AI applications. In partnership with the CIO, we are implementing reciprocity and risk-based approvals that prevent each system from having to start from scratch. For example, if an AI application has already been securely deployed in one military Service, another Service or Command should not have to reinvent the wheel to approve it again. We're establishing enterprise baseline security controls and common test and evaluation (T&E) protocols for AI, so that once a product meets those standards, it can be leveraged in multiple environments without redundant testing. Pilot programs in this vein, such as a "Fast-Track ATO", have shown we can cut approval times. Accelerating these authorities is critical for emerging capabilities.

- **Modern, AI-Ready Infrastructure:** Alongside expedited ATO processes, we are ensuring the Department's digital infrastructure can support AI development, deployment, and sustainment at scale. This includes expanding access to secure, high-performance, accelerated computing for general purpose AI use cases across classification levels and operational theaters. The DoD requires scalable, accessible compute capability, not just for experimentation, but for real-time mission support.

- **Authorities, Permissions, and Culture:** Beyond processes and hardware, speeding up adoption on our networks requires a culture shift toward intelligent risk-taking. We are working on policy updates that empower commanders and program managers to approve iterative upgrades to software (including AI models) without higher headquarters micromanagement. This approach draws from modern DevSecOps practices and is consistent with the recent OMB Memo M-25-21, which urges agencies to "identify and remove operational barriers to AI adoption" while maintaining governance.

In sum, our efforts to accelerate authorities and permissions are about ensuring the plumbing and regulations of our digital ecosystem are as advanced as the technology itself. Thanks to a strong partnership with the DoD CIO, who is focusing on areas like Zero Trust security and network modernization, I am confident we are building an environment where data and AI tools can be rapidly and securely fielded. Continued emphasis and priority on these basic fundamentals from Congress will be how we stay ahead of adversaries in the digital competition.

ENHANCING ACCESS TO AUTHORITATIVE DATA

Enhancing access to authoritative data is perhaps the most foundational of all. Data is the fuel for analytics and AI. Without accessible, high-quality data, even the most sophisticated algorithms will falter.

- **Expanding Access to Government Networks and Data:** The CDAO's new Open Data and Analytics Government-owned Interoperable Repositories (DAGIR) initiative is an acquisition approach to ensure government ownership of data in contractor-run data platforms and expanded industry software development with data from across those platforms. It describes how software systems should be designed and acquired so that functions at one layer of the stack do not require the government to use the same vendor of system at higher or lower levels. By providing access to government networks and data, Open DAGIR enables the DoD to better achieve operational decision advantage and management efficiencies. CDAO's investments in Open DAGIR stacks to date include Advana, Maven Smart System, and Edge Data Mesh.

- **Implementing the Data Strategy:** The DoD's Data Strategy defines principles such as making data visible, accessible, understandable, linked, trustworthy, interoperable, and secure (VAULTIS). The CDAO has operationalized these principles by leading the implementation of a department-wide data architecture. We are moving away from isolated data silos toward an enterprise data mesh that treats data as a strategic asset. Our premiere environment is Advana that allow data to be accessed and queried securely across organizational boundaries. As DoD's enterprise analytics platform, Advana has matured and gained more than 100,000 users since its foundation.

In summary, our push to enhance access to authoritative data is enabling the DoD to function as a coherent information enterprise. Data is the connective tissue of Joint Warfighting, and the Department is strengthening it through common standards, modern architecture, and diligent governance.

CONDUCTING FREQUENT EXPERIMENTATION WITH COMBATANT COMMANDS AND WARFIGHTERS

Our fourth major line of effort is "removing the requirements man in the middle" by conducting frequent experimentation on live networks with real DoD data. CDAO is doing this by strengthening engagement with the Combatant Commands (COCOMs), bringing the power of data and AI directly to the front lines of operations and planning. The Combatant Commands are where joint warfighting needs are most pressing, and they often generate the demand signals that drive innovation. For the CDAO, experimentation with COCOMs and other DoD users ensures we remain mission-focused and helps us tailor our efforts to real operational problems.

- **Experimentation for Joint Warfighting:** We are prioritizing critical mission use cases to demonstrate the power of better data access. One such example is through the CDAO's experimentation efforts: Global Information Dominance Experiment (GIDE) series and the AI Rapid Capabilities Cell (AIRCC). The GIDE series—co-sponsored with the Joint Staff—is an iterative experimental series to deliver incremental data and software capabilities to warfighters and Combined Joint All Domain Command and

Control (CJADC2) efforts. Industry developers sit side-by-side with DoD users to better understand their workflows and hear directly about what they need to achieve their mission.

- **Feedback from the Front Lines:** Strengthening engagement is not just about pushing technology to the field; it's about listening to our warfighters. A key theme CDAO hears is the need for continued training and education. It's not enough to send an AI model; we must also train personnel to trust and effectively employ these new tools.

A tight coupling between the tech community and the warfighting community accelerates adoption (since solutions are co-developed with end-users) and helps mitigate operational risks (since warfighters help test and refine tools under real conditions). Most importantly, it gives our commanders an edge to leverage the best that American innovation offers, with the CDAO acting as a bridge between the Pentagon and the tactical edge. This is vital for maintaining our military's competitive edge and readiness in the face of determined adversaries.

MORAL DUTY AND RESPONSIBILITY

Before concluding, I want to address how the CDAO is ensuring that as we accelerate the use of data and AI, we do so ethically, responsibly, and with the public trust in mind. The Committee and the American people rightfully expect that even as we adopt cutting-edge technologies, the Department will uphold the highest standards of accountability, protect privacy and civil liberties, and ensure our AI systems are safe and effective. This is a bipartisan priority and a personal commitment of mine.

Recent actions at the national level reinforce our efforts. The White House OMB's Memorandum M-25-21 requires agencies to foster AI innovation, advance AI governance, and promote responsible AI use. Additionally, OMB M-25-22 on AI procurement aligns with our push to include ethical and security considerations in contracts.

In short, the CDAO is embedding ethics, safety, and governance into every level of our data and AI transformation to remain principled and accountable. It strengthens our hand against adversaries who might use AI recklessly or coercively by contrast, and it maintains the vital support of the American people and our international partners as we innovate.

CLOSING

In closing, I want to emphasize the strategic significance of accelerating adoption of data, analytics, and AI in the Department. By harnessing data, analytics, and AI, we are empowering our commanders and troops to make faster, smarter decisions; we are bolstering our readiness by improving how we maintain equipment and manage resources; and we are enhancing our deterrence by developing new capabilities that increase the speed and agility of the joint force. All of this contributes to a more lethal, resilient, and responsive military, ready to meet the challenges of any threat that comes our way.

I also recognize that technology is only one piece of the puzzle. Just as important is the human element, by training our people, adapting our organizations, and instilling a culture that embraces innovation. The warrior ethos that Secretary of Defense Hegseth calls for is completely compatible with a force that leverages AI. In fact, a true warrior in the 21st century

must be adept with information and technology. AI will not replace commanders or warfighters, but those who use AI will have a significant advantage over those who do not.

Our work in the CDAO is a team effort, integrated with the broader DoD modernization enterprise. I would like to acknowledge the partnership with the DoD CIO for our efforts are tightly linked. The CIO is building the digital infrastructure and cybersecurity posture needed for the Department, while the CDAO is leveraging that foundation to deliver data and AI capabilities at scale. Together, we are aligning our investments and approaches so that networks, cloud, data, and AI all advance in sync, each enabling the other. This collaborative posture extends to the Services, the Joint Staff, our allies, and of course, this Congress.

The oversight and support of this Committee have been instrumental in standing up the CDAO and guiding its mission. On behalf of my team, I thank you for your leadership in prioritizing the Department's digital transformation. Going forward, I am committed to continued transparency with Congress about our progress and challenges. Staying ahead requires constant innovation and adaptation. With the groundwork we have laid and the strategic direction we are pursuing, I am confident that the CDAO will deliver on the promise of data and AI to help secure our nation.

Thank you again for the opportunity to testify. I look forward to your questions and to working together to ensure our warfighters never face a fair fight.