

U.S. Senate AI Insight Forum – National Security

Written Statement of Gregory C. Allen

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Leader Schumer, Senators Rounds, Young, and Heinrich, and distinguished members of the Senate, thank you for the opportunity to join you today. My name is Gregory Allen, and I have the privilege of serving as the Director of the Wadhvani Center for AI & Advanced Technologies at the Center for Strategic and International Studies (CSIS). We at CSIS were honored to host Leader Schumer when he originally announced this bipartisan AI initiative, and it is my honor to participate today.

Prior to assuming my current role, I served as the Director of Strategy and Policy at the Department of Defense (DOD) Joint Artificial Intelligence Center (JAIC). Among my diverse duties at the DOD were strategic planning for AI adoption, policy and workforce reforms, industry engagement, foreign affairs, and AI ethics.

Today, I hope to offer a perspective that is informed by my experience seeking to accelerate the Department of Defense's ethical and safe adoption of military AI technology, as well as my policy research both before and afterward, which has included a significant focus on semiconductor export controls and China's AI ecosystem.¹

Leadership in AI will be the foundation of military power in the 21st century, and Congress will inevitably play a critical role in the success or the failure of the DOD's AI transformation. In simple terms, if Congress seeks to accelerate AI transformation, it can do two things: provide more resources, or increase the effectiveness of resources by removing barriers. Congress should do both. The funding environment is significantly better than was the case when the JAIC was established, but it is still only a fraction of the overall opportunity.

My experience at the Department of Defense instilled in me a strong sense that the barriers to DOD AI adoption have more to do with the Department of Defense's policies and processes than they do with the current state of AI technology.² We do not need to wait for a future AI breakthrough. We need a DOD that can effectively harness AI today. If Congress wants the United States military to lead the world in AI adoption, a good place to start would be the question: what barriers make doing AI in the DOD so difficult?

In my view, there are four major areas where Congress should focus its efforts:

¹ Allen, Gregory C. "In Chip Race, China Gives Huawei the Steering Wheel: Huawei's New Smartphone and the Future of Semiconductor Export Controls." Center for Strategic and International Studies, October 6, 2023.

<https://www.csis.org/analysis/chip-race-china-gives-huawei-steering-wheel-huaweis-new-smartphone-and-future>

² Allen, Gregory C. "Six Questions Every DOD AI and Autonomy Program Manager Needs to Be Prepared to Answer." Center for Strategic and International Studies, May 15, 2023. <https://www.csis.org/analysis/six-questions-every-dod-ai-and-autonomy-program-manager-needs-be-prepared-answer>.

1) Provide sustainable funding for DOD-wide or at least service-wide AI infrastructure that is suited to the unique requirements of data-driven machine learning.

The traditional approach to computing infrastructure is for each Program of Record to provide and sustain the computing infrastructure associated with its weapons system. This is easy for Congressional appropriators to track but ill-suited for the reality of modern digital technology. It means that Combatant Command operations centers are filled with one-of-a-kind computer systems that generally struggle to share data and interact with the other systems that are a part of that network. It also means that each Program of Record has to start almost from scratch rather than building atop of a flexible and mature software and data platform. The DOD should learn from the U.S. Air Force's success with Platform One as a secure development, testing, and operational platform and seek to replicate it on a DOD-wide basis, or at least for more services. Congress should support this effort and resource it appropriately.

2) Identify high priority AI and autonomy mission use cases and create programs of record with the funding and mandate to address these areas.

AI is not a discrete item but a general-purpose technology, analogous to electricity or computers. The breadth of potential AI use cases is nearly as broad as that of traditional software, which underpins capabilities as radically divergent as word processing and missile guidance systems. As such, there are far more AI-related opportunities than the DOD can realistically pursue, especially simultaneously. The DOD should therefore seek to identify a few transformative applications— informed by the battlefield lessons of the war in Ukraine—and create Programs of Record that are fit for purpose to pursue those opportunities. AI development efforts that occur outside of military service Programs of Record often struggle to organize and sustain capabilities once they proceed past the development stage. They also struggle to transition those capabilities to organizations that can sustain them. A strong example of capabilities that would be a good fit for new Programs of Record are the low-cost and attritable autonomous systems described in the DOD's newly announced Replicator initiative. While there are significant opportunities to improve the Program of Record approach, that should not dissuade Congress from supporting DOD in creating new AI- and autonomy-focused Programs.

3) Make it easier for Combatant Commands to support systems development and evaluation by updating the current requirements process and approach to colors of money.

Too frequently, the DOD requirements process presumes that the requirements-setting community will correctly anticipate changes in future technology and an evolving threat landscape. Moreover, it tends to reduce the number of instances where the operational community in Combatant Commands can provide feedback and input to the research and development community. This can work well for long-lived hardware platforms, but it is a poor fit for AI-enabled and modern digital technologies, which need real-world testing, feedback, and most of all data from the operational community. The current system, both in personnel billet allocations and color of money stipulations, makes it far too difficult for the operational community to devote time and resources to providing the feedback that the development community needs. Moreover, it actively discourages Combatant Commands from providing the operational data that is a vital asset for creating and sustaining AI-enabled systems.

4) Career tracks – make it easier for military and civilian personnel to advance in their careers by acquiring and using AI-related technical expertise.

The military personnel management system generally values and promotes the things that the U.S. military has known it will need for decades. There are few mature career pathways that value—especially in terms of promotion criteria—AI, data, and software related skillsets.

The situation is slightly better in the civilian workforce. However, much of the DOD’s recent attention when it comes to improving the government’s AI talent pool has focused on ensuring that the DOD has special hiring authorities related to AI talent. However, there is an additional challenge that is not often discussed, due to its sensitivity: ensuring that the precious time of the precious few AI experts who do serve in government is not wasted and that they have opportunities for career advancement. Too often, it is. The above-mentioned challenges can mean that AI experts spend their time struggling against bureaucracy rather than using their expertise to develop capabilities that can help the DOD fight and win.

Conclusion

For decades, U.S. military technological leadership has been so decisive as to be taken for granted. Today, that is no longer a safe assumption. AI technology is not only changing the sources of military advantage, but also enabling new paradigms of military operations. For the United States DOD, leading in this new era of AI-enabled technology requires more resources, used more effectively. Congress must play a critical role in both.

Thank you, and I look forward to today’s discussion.