

Underwritten by:

DELLTechnologies

Sandbox to Scale:

The people, processes, and platforms
needed to accelerate AI across
the DoD

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MeriTalk[®]

Introduction

Department of Defense (DoD) IT leaders are working to move beyond pilot programs and embed AI into mission workflows.

America's AI Action Plan affirms, "The United States must aggressively adopt AI within its Armed Forces if it is to maintain its global military preeminence while also ensuring ... that its use of AI is secure and reliable."

While DoD leaders recognize this imperative, effectively scaling AI initiatives remains a challenge. Defense-specific requirements like secure data environments, distributed operations, and multi-domain coordination add layers of complexity not experienced by their civilian counterparts.

In this new study, MeriTalk and Dell Technologies surveyed 75 DoD IT decision-makers across the military services, combatant commands, and defense agencies to pinpoint where AI pilots are gaining traction and what differentiates projects that successfully scale.

For the purposes of this research:



AI

is the ability of computer systems to simulate human intelligence to perform tasks



Generative AI (GenAI)

is a subset of AI that leverages large datasets to create high-quality content in many forms, like text, images, video, and software code



Agentic AI

refers to emerging AI systems that can autonomously plan, make decisions, and take action to accomplish goals

Executive Summary



DoD leaders recognize AI as mission-critical, but systemic barriers thwart scaling efforts:

- 95% of DoD IT leaders say AI is essential to delivering on their mission, and 97% already credit GenAI with measurable productivity gains
- Yet just 22% are scaling AI or embedding it across multiple DoD workflows, and 88% say their agency is more likely to launch a new pilot than scale an existing one
- Most common factors in AI projects that have stalled or failed? Insufficient cybersecurity planning (44%), governance or compliance issues (43%), and a lack of funding to scale (39%)



Mission-ready agencies are scaling AI with investments across people, processes, and platforms:

- When it comes to their **people**, DoD leaders say the most effective enablers to helping them scale AI initiatives have been giving staff time for AI exploration, improving change management practices, and hiring talent with AI/ML expertise
- For **processes**, leaders credit developing clear risk management and compliance processes, prioritizing mission-aligned use cases, and streamlining funding and lifecycle processes
- On the **platform** side, the most impactful actions include modernizing data infrastructure, improving integration between legacy systems and new AI platforms, and deploying cybersecurity best practices, including tools for continuous monitoring



Security, scale, and speed will define the next five years:

- Looking ahead, DoD leaders say secure, scalable infrastructure (49%) will be the No. 1 determinant of AI success over the next three years – significantly ahead of actionable governance (31%) or an AI-ready workforce (20%)
- When it comes to impact, they see cyber warfare defense, force optimization, and streamlining procurement as the greatest opportunities for AI to transform the DoD by 2030

Mission Priorities Driving AI

Most DoD organizations are still in the early stages of AI adoption, with 56% exploring use cases and 22% running pilots – but momentum is building fast. Leaders report early wins in cyber defense; Intelligence, Surveillance, and Reconnaissance (ISR) systems; and force readiness, and 97% say GenAI is already boosting productivity.

Formal AI adoption remains early-stage:

56% of DoD agencies are still exploring use cases

22% are running pilots or proofs-of-concept

22% report scaling or embedding AI across multiple workflows

But early results signal strong momentum:

97% say GenAI has already boosted productivity

95% call getting AI right “essential” to mission success

77% are actively exploring agentic AI

Where are DoD leaders seeing the most early success?

Cyber defense and threat hunting



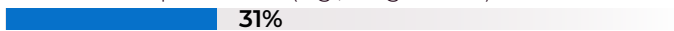
Intelligence analysis and ISR systems



Talent management optimization



Force health protection (e.g., diagnostics)



Structural and Cultural Friction

DoD momentum stalls without structure. Fewer than a third report formal AI governance frameworks or dedicated budgets. Nearly nine in 10 leaders (88%) say their agency is more likely to launch a new AI pilot than scale a successful one and 79% remain concerned about adversarial use of AI.

Structural gaps:

Only

27%

say their agency has an approved AI governance framework

Just

29%

say AI initiatives have a dedicated budget separate from general IT

Culture and pressure:

91%

feel pressure to show AI results – even if they're not fully ready

88%

are more likely to launch a *new* AI pilot than scale an existing one

85%

hesitate to move even successful AI pilots into production due to perceived risk

Additionally,

79%

are concerned about adversarial use of AI against DoD missions

Defense-Specific Challenges

AI efforts stall when security, oversight, and scale don't align. Nearly all DoD leaders (97%) say they've had an AI project stall or fail – most often due to gaps in cybersecurity planning, governance, and funding. Distinct barriers to scaling across domains include supply chain risks, cross-domain solution (CDS) limitations, and difficulty validating models in classified environments.

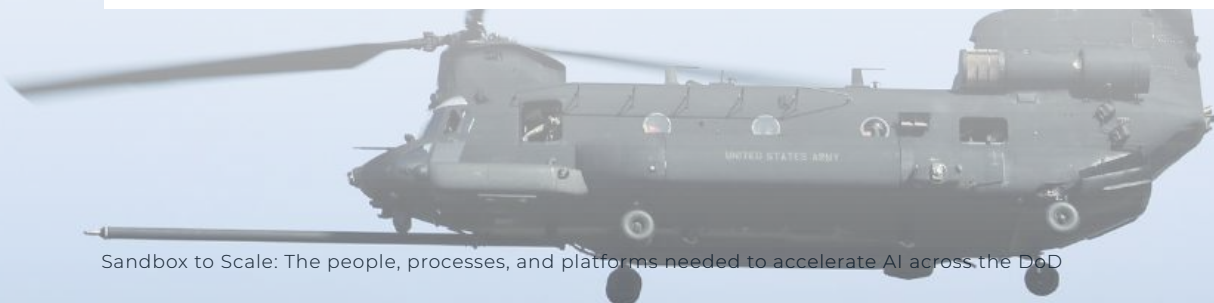
Most common factors in AI projects that have stalled or failed?

- #1 Insufficient cybersecurity planning (44%)
- #2 Governance or compliance blockers (43%)
- #3 Lack of funding for scale-up (39%)
- #4 Poor data quality or availability (36%)
- #5 Difficulty integrating with existing systems (35%)

Top technical barriers to scaling across classified and unclassified environments?

- #1 Supply chain security for AI tools (47%)
- #2 Lack of CDS capabilities (45%)
- #3 Model validation and testing in classified environments (37%)
- #4 Data classification challenges tied with the need for cleared AI development talent (36%)

93% say their agency needs help accelerating AI deployments from pilot to production



What Works in DoD Environments

DoD leaders say their most impactful AI enablers span people, processes, and platforms – from modernizing data infrastructure and creating space for staff to explore AI tools, to defining clear risk and compliance protocols. Momentum builds when agencies connect mission use cases with empowered teams, streamlined approvals, and secure, integrated architectures.

Which steps have been most important in helping to scale AI initiatives?

When it comes to our agency's **people**:

Providing staff with time and space to explore AI tools



Improving change management practices to drive AI adoption



Hiring new talent with AI/ML expertise



When it comes to our agency's **processes**:

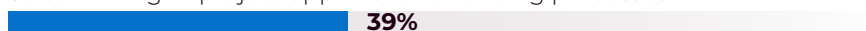
Developing clear risk management and compliance processes for AI



Prioritizing AI use cases tied directly to mission outcomes



Streamlining AI project approval and funding processes



Standardizing AI lifecycle processes (development, deployment, monitoring)

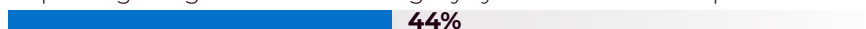


When it comes to our agency's **platforms**:

Modernizing data infrastructure to improve access and quality



Improving integration between legacy systems and new AI platforms



Deploying tools for continuous AI monitoring and observability



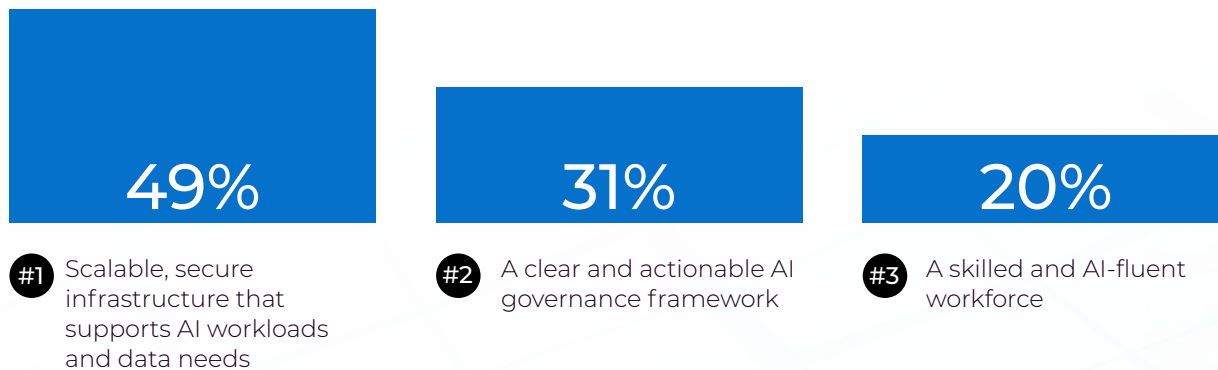
Integrating cybersecurity best practices into AI system architectures



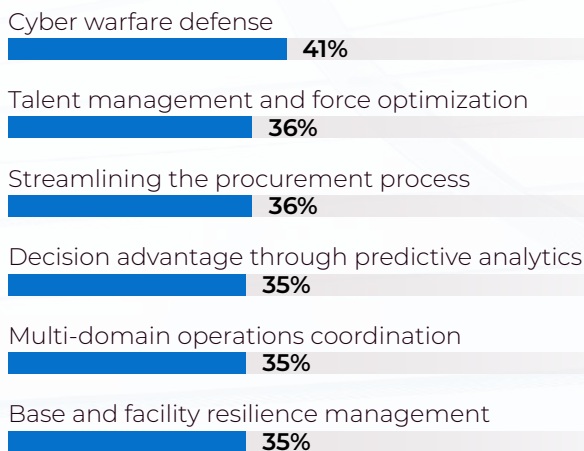
Looking Ahead: Success Drivers & Opportunities

DoD leaders say scalable, secure infrastructure will make or break AI success over the next three years. Over the next five years, they expect the biggest payoffs in cyber resilience, streamlined procurement, predictive decision support, and citizen-facing innovation.

What will be the primary factor that determines the DoD's AI success over the next three years?



Where do you see the greatest opportunity for AI to transform DoD operations in the next five years?



Additionally, **80%** say **sovereign AI** – a nation's effort to develop and produce AI using its own infrastructure and data – will be very important for driving innovation across the U.S. government and economy

Recommendations

Move winning pilots beyond the lab.



With 88% of leaders more likely to launch a new pilot than scale a proven one, DoD risks remaining in perpetual experimentation mode. Reverse this trend by requiring every pilot to define mission outcomes, a sustainment plan, and production intent from day one. The AI Action Plan pushes DoD to identify and automate priority workflows, and transition successful pilots into permanent operations. Pair this mandate with lifecycle gates aligned to DoD CIO's Software Fast Track and automated compliance to accelerate ATO. In FY26 and beyond, disciplined scaling will define AI readiness.

Lay the groundwork for effective growth.



AI won't scale without secure, flexible infrastructure that bridges classification levels. Nearly half (49%) of DoD leaders say scalable infrastructure will be the No. 1 driver of AI success in the next three years. Focus investments on CDS, zero trust, and secure compute enclaves that support model development, deployment, and monitoring across networks. Build on the AI Action Plan's directive to stand up a DoD proving ground and formalize emergency compute access to support experimentation and operational resilience.

Codify cyber and compliance into the AI lifecycle.



AI can't scale without built-in security. With 44% citing insufficient cyber planning and 79% worried about adversarial use, governance and risk mitigation must be embedded – not bolted-on. Integrate supply chain vetting (e.g., SBOMs), zero trust principles, and real-time telemetry into every phase of development. Leverage continuous ATO models to automate red-teaming and compliance. Partner with industry, as outlined in the AI Action Plan, to defend against insider threats and share AI-specific vulnerabilities across the defense ecosystem.

Double down on cyber defense and ISR.



Cyber defense and ISR already show strong returns, each cited by 48% as leading AI use cases. Prioritize these domains for full production support, including CDS-ready environments, sustained funding, and cleared AI teams embedded in operations. Sharing early wins can build leadership confidence, serve as a template for scaling AI into other critical domains like logistics and force readiness, and reinforce alignment with the AI Action Plan.

Methodology

MeriTalk, in collaboration with Dell Technologies, surveyed 75 Federal IT decision-makers from DoD agencies in June 2025. The research has a margin of error of $\pm 11.29\%$ at the 95% confidence level.

Job title:

CIO, CTO, CAIO, or CISO	42%
Deputy or assistant CIO, CTO, CAIO, or CISO	15%
Director of IT/technology	23%
IT program manager/officer	16%
Data, AI, infrastructure, or network manager	4%

100% of respondents are familiar with their agency's current or planned use of AI



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Thank you to our underwriter

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