

Improving Defense Mission Outcomes

Through Data Insights and Human-Centered Design

The Department of Defense (DoD) collects vast amounts of data from around the world – [an estimated 22 terabytes of data each day](#). This data is the linchpin to an information advantage and, subsequently, decision advantage, feeding defense mission leaders actionable insights for mission assurance.

As DoD prioritizes multi-domain operations to achieve the increasingly complex mission requirements put forth in the Combined Joint All-Domain Command-and-Control initiative (CJADC2), DoD must decentralize data while pursuing more collaboration and information-sharing for decision advantage.

This is an enormous undertaking requiring leadership alignment but also a human-centered design approach to facilitate user-focused solution development.

Turning Data into Actionable Insights

To make meaningful decisions and develop user-centric solutions, data management must be connected to desired mission outcomes. Data also needs to be secure, quickly accessible, and presented in a way that meets the user's needs on a variety of devices.

When working with a DoD customer, understanding how users access data to meet mission requirements is critical. At the Defense Information Systems Agency (DISA), Maximus enhanced data monitoring and developed a cyber-centric dashboard to improve cyber incident response while accounting for user needs, workflows, and access to data.

Starting with human-centered design, DoD can leverage actionable data insights at the speed of mission relevancy.

Solutions Designed for the End User

Human-centered design is an approach where technology solutions are designed by talking to the end user at the beginning of the process. User requirements are collected and analyzed, then processes are developed based on the user's needs in ways that are repeatable, predictable, and scalable. For every solution, security is woven in at the design level.



Human-centered design follows a research methodology to be successful.

Step 1: Discover. Learn everything possible about the end user and their data needs through workshops to understand challenges and potential opportunities.

Step 2: Capture. Define and document user needs, including data requirements and where existing data may be located. Evaluating people, processes, and technology is part of this effort.

Step 3: Pain Points. Identify pain points and brainstorm solutions. Workshops are developed to depict moments that matter within DoD processes.

Step 4: Prototype. Develop a solution designed to deliver the right data to the end user based on feedback from people who will be interacting with the system daily.

Step 5: Test. Measure key metrics to ensure the solution fits the technology and user requirements.

Step 6: Iterate. Evaluate and incorporate feedback to ensure the solution meets user needs and offers an improved user experience.

The Convergence of Data Management and User Experience

Modernizing data management for an improved customer and user experience can help DoD lay the groundwork for agile, user-centric solution development while driving information advantage. This is achieved through:

Maintenance and Optimization in the Cloud

As DoD continues to mature in the cloud, maintaining and optimizing data, software applications, and security tools will be key to ensuring mission integrity. Sustainable software development and data management in the cloud will help DoD find new efficiencies and sharpen information advantage.

Human-Centered Design Approach

Defining the end-user experience at the beginning of the process leads to finding the right technology and digital solutions to solve mission problems. Adopting a proven, methodical human-centered design approach is key to mission assurance.

Secure By Design Solutions

Security should be part of the design process from the very beginning. Including security measures at the beginning of the solution development process helps ensure data remains secure from the point of input, while in transit, and at rest.

AI and Automation as an Enabler

By starting with an understanding of desired mission outcomes and taking a human-centered approach, DoD should work with industry partners to identify the best use cases for AI to maximize impact. To accelerate AI, Maximus leverages a ModelOps approach, which provides guiding principles and practices to help agencies build an AI model development and deployment architecture that guides automated, responsible AI development and implementation.

Data Visualization

A human-centered design approach uncovers challenges to build a data journey map or dashboard for delivering actionable information. Developing a data visualization dashboard can help DoD track progress across data management, governance, hygiene, and maturity models for improved solution development.



Proven Processes to Deliver Customized Solutions That Scale

Maximus effectively manages vast amounts of data for federal agencies, drawing on decades of experience while ensuring security, accuracy, and accessibility. Leveraging modern technologies and methodologies to provide comprehensive data management solutions that include data governance, quality control, integration, and analytics is critical for mission success. Expertise in navigating the regulatory and compliance landscape of federal data management positions Maximus as a trusted partner for DoD looking to optimize data assets.



DISA: Improving Mission Outcomes with Enhanced Data Management

The Defense Information Systems Agency (DISA) is charged with protecting our nation's systems and networks from constant and increasingly sophisticated cyberattacks.

With DoD teams sending and receiving sensitive information, DISA must continuously monitor networks to collect and analyze data to detect security events and prevent bad actors from compromising data.

To meet its mission, DISA turned to Maximus to help its teams with data management and to improve data governance. The collaboration resulted in advancing DISA's cybersecurity posture by:

- Enhancing data monitoring through data collection and analysis
- Designing and implementing a cyber-centric dashboard for leadership
- Establishing compliance scans to ensure security of recently deployed software and devices
- Developing a holistic process that ensures seamless integration of security solutions to ensure data is secure

With Maximus's support, the Security Operations Center in DISA's Enterprise Service Office improved its incident response effectiveness by 50%. This helped DISA improve incident response workflows and playbooks to protect sensitive information from malicious threats.

Learn how Maximus can build customizable solutions to DoD data challenges at [maximus.com/defense](https://www.maximus.com/defense).