

# How the Defense Department accelerates digital modernization and transformation

Critical for achieving audit and mission readiness



# Introduction

Digital transformation is becoming an imperative for the Defense Department (DOD) in order to enable the Soldier, Sailor, Airman, Marine, or Guardian to make decisions at the speed of relevance. New and emerging technologies continually change the digital landscape. To maintain pace with advancing technologies, the [Department of Defense Software Modernization Strategy](#) was approved February 1, 2022, and sets a path for technology and process transformation. *The Department's competitive advantage, today and tomorrow, is reliant on strategic insight, proactive innovation, and effective technology integration enabled through software capabilities.*([Source](#))

However, the DOD finds itself facing tight budget constraints coupled with increasing threats from near-peer adversaries. The technology solutions in place today that run DOD's Enterprise Resource Planning (ERP) backbone (finance, supply chain, and human resources) are struggling to provide the rapid innovation and lower costs needed. DOD would benefit from transitioning their legacy ERP solutions to a highly composable business architecture that leverages a unified data core and embedded emerging technologies; supports integrated business processes; and enables rapid composite application extensions using low code/no code tools. DOD service members and civilians are in the best position to drive rapid innovation; it's on us to provide them with a software as a service (SaaS) suite that allows them to do so.





DOD is dedicated to delivering resilient software capability at the speed of relevance. The FY 2022 budget includes investments to enable software modernization with cloud services as the foundation to fully integrate the technology process and people needed to deliver next generation capabilities.

[Source](#)

The speed of innovation and digital transformation are critical enablers to ensuring the highest readiness posture of our forces. [Oracle Fusion Cloud SaaS applications](#) can help DOD converge their critical mission-support functions onto a cloud native architecture that provides high security and helps support advanced analytics using AI; innovate faster; and lower their total technology debt while improving force readiness. The foundations of this digital transformation include:



**Recruit, develop and retain top-tier talent:** The future fight is increasingly in the digital domain, and enabling digital talent is a major tenet across DOD. Recruitment, retention, and reskilling of the DOD workforce is a top priority to ensure higher-value service delivery.



**Ensure supply chain resiliency:** COVID-19 revealed the fragility of supply chains and required a reset to improve resiliency and agility. Leveraging AI, ML, and IoT to translate data into actionable insight will positively impact mission execution.



**Provide audit-ready fiduciary management:** The finance, operations, and personnel data that warfighters and military decision-makers are using at the DOD is also the data that is being audited. The finance team must intelligently automate resource-intensive mundane tasks, ensure the data is accurate, and that its end-to-end processes are fully auditable.



**Scenario plan to conquer complexity:** It is crucial that defense agencies and military services can scenario plan their budget against various situational factors. DOD needs intelligent tools to support the entire planning, programming, budgeting, and execution process.



**Improve cyber-readiness across all systems:** To improve the nation's cybersecurity, DOD has issued a policy directive to advance toward zero trust architecture; accelerate movement to secure cloud services; and centralize and streamline access to cybersecurity data to drive analytics for identifying and managing cybersecurity risks.



**Operationalize information for mission execution:** The DOD recognizes data as a strategic asset that must be transformed into actionable information in real time. This agile mission requirement drives the Department to commercial cloud computing as the go-to solution for modern, secure, seamless, transparent, and data-centric operations.



Fighting and winning on the next battlefield will depend on DOD's proficiency to rapidly and securely deliver resilient software capabilities. This proficiency must empower the warfighter and cyber defenders with the latest innovations to better understand the battlefield, enable Joint All Domain Command and Control (JADC2) with automation and machine learning, and arm leaders with a decision advantage through the aggregation and processing of data.

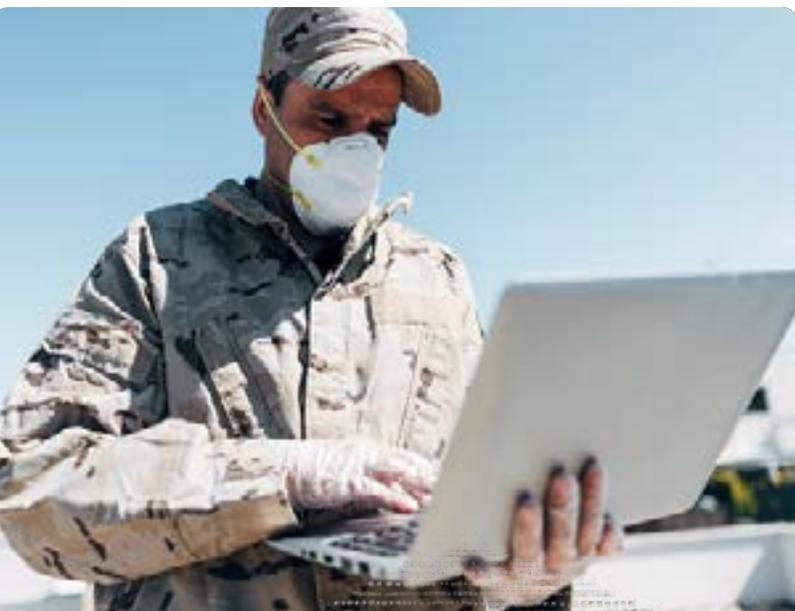
[Source](#)

# Oracle as a mission partner

## FedRAMP Moderate JAB P-ATO, DISA IL4 P-ATO

Oracle helps the government modernize their aging systems and accelerate their digital transformation journey by redefining best practices and transforming processes to enable resilience and speed. As a long-standing strategic partner of the U.S. Government, Oracle can help the Defense Department meet critical missions with the most complete portfolio of cloud services, which includes software as a service (SaaS), infrastructure as a service (IaaS) and platform as a service (PaaS).

[Oracle SaaS applications](#) support DOD mission readiness with a complete, connected SaaS suite. By delivering a modern user experience and continuous innovation, Oracle is committed to the DOD's success with quarterly updates across the entire mission: finance, human resources, supply chain, manufacturing, projects, procurement, maintenance, and service.



Oracle's SaaS applications optimize composability and leverage data in a unified data model, but can also integrate data from legacy applications using published REST APIs. By applying automation, AI, and ML across all business functions, Oracle Fusion Cloud Applications help defense organizations eliminate human error, automate processes, mitigate business risks, obtain better business insights, and deliver personalized recommendations to warfighters and staff.

Oracle has a complete set of SaaS applications with an advanced global cloud infrastructure, and built-in cybersecurity capabilities. Oracle Cloud Applications provide agencies with the breadth and depth of functionality they need for critical missions. Oracle doesn't just offer an [IL4, FedRAMP](#)-authorized, secure, reliable, cost-effective option that drives cost savings and efficiency, we exceed those expectations to help support innovation for agency modernization. With Oracle Cloud, the Defense Department has access to transformational technologies such as digital assistants, AI, ML, IoT sensors, and blockchain that help them integrate real-time information into planning and eliminate delays in decision-making by delivering prescriptive insights.

# The foundations of digital transformation for DOD

## 1 Recruit, develop and retain top-tier talent

With pressure on agencies due to retirements, reskilling to adopt new technologies, and recruiting individuals with the right talents, DOD HR professionals require robust systems to modernize the workplace and help ensure effective, efficient mission delivery. Core to the success of these initiatives is people.

The lack of an integrated talent management solution that onboards the service member, provides them with mission-ready training, and vectors them throughout their career is affecting DOD's ability to retain top talent. Moreover, military services are struggling to fill critical occupational jobs. The integrated HR system also needs to have diversity and inclusion functionality embedded in all HR processes, such as a talent review, to ensure all personnel have a chance to succeed supporting the DOD mission.

Moving to a cloud native solution such as [Oracle Fusion Cloud HCM](#) enables a single source of truth for HR data to help improve decision-making, and empowers you with market-leading innovation to address your needs. Oracle Cloud HCM is a complete human capital management solution that connects every human resource process from hire to retire. It provides a consistent experience across devices help engage service members, helps attract the best candidates, boosts productivity through better career and performance management, and helps improve decisions with end-to-end [Talent Management](#) succession planning, and strategic workforce management.

Our Cloud HCM solution complements DOD's on-premises HR systems by integrating and synchronizing personnel records and allowing the Department to take advantage of our Talent Management Cloud capabilities. This way DOD can launch targeted talent management initiatives to recruit and retain talent in critical occupational codes while continuing to roll out their on-premises systems.

**According to Marine Corps Talent Management 2030, their modern operational concepts and organizations cannot reach their full warfighting potential without a talent management system that recruits, develops, and retains the right Marines.**

[Source](#)



The DOD has selected Oracle Cloud Human Capital Management (HCM) to help transform its HR operations in support of 900,000 civilian employees. [Source](#)



## Enhance the HR experience for a skilled and capable DOD workforce

Provide a consistent employee experience across devices, enable a single source of truth for HR data to improve decision-making, and empower personnel with new capabilities to prepare your talent for the next mission.

[Explore Oracle Cloud HCM](#)



## 2 Ensure supply chain resiliency

COVID-19 was not the first global event to disrupt supply chains, but it revealed the fragility of the modern supply chain and required a reset to improve resiliency and agility. When things change fast, DOD needs to anticipate mission demands and be prepared with systems that quickly adapt to your needs and help you plan for success beyond your next move.

For example, Oracle Fusion Cloud Supply Chain Management (SCM) connects your supply network with an integrated suite of cloud business applications including planning, inventory management, logistics, product lifecycle management, and maintenance. During the pandemic, Oracle Cloud Applications helped organizations quickly reroute critical supply deliveries away from distribution centers that were in COVID hot zones. Leveraging cloud capability, these organizations used warehouses outside the hot zone and transported critical supplies in via a different route. Defense organizations need this same capability.

### Monitoring and maintaining combat-ready fleets

Keeping the fleet of aircraft mission-ready at all times requires tight planning, scheduling, and resource management. The Air Force relies on Oracle to manage its Complex Maintenance, Repair, and Overhaul [\(cMRO\) processes](#).

We understand that our Soldiers, Sailors, Airmen, Marines, and Guardians will operate in remote areas that may not have reliable communications. Oracle's SaaS applications cloud suite can be extended using low code/no code tools to create mobile, composite applications that can operate off the net and transmit information securely once they get a reliable SATCOM signal. Customizations that DOD has coded into their legacy ERP applications would be loosely coupled into our PaaS layer to allow DOD to update their applications quarterly for new mission functionality. The burden of high-cost upgrades because of customizations is lightened. This extension design will also allow the armed services to leverage their software factories to rapidly extend and test new functionality using REST APIs into our SaaS applications; a must for the warfighters.

### Strengthen the resiliency of supply chains

Respond faster to supply chain pressure and ensure continuity of the Department's mission-essential functions. Leverage AI and IoT to translate data into actionable insight; connect operational, customer, product, and machine data for efficient issue detection and multitier visibility; and get advanced insights across the supply network.

[Explore Oracle Cloud SCM](#)

### 3 Provide audit-ready fiduciary management

Your mission depends on putting every dollar to its best use and to ensure its end-to-end processes are fully auditable. DOD can benefit from a modern solution that meets federal financial management requirements and supports an increasing demand for effective programs that align with ever-changing legislative policies. Intuitive real-time data visibility and accurate transaction reporting across defense organizations is essential. Cloud applications can deliver automated and integrated transactional data within and between agencies, enabling staff to meet regulatory requirements and tailor service delivery that provides a digital government experience. We support dozens of defense agencies that maintain their complex financial systems using Oracle E-Business Suite. Many of these customers have achieved a clean audit opinion, a great accomplishment. We are bringing our decades of proven federal financial management experience and capability to our cloud native Federal Financials Cloud.

#### [Oracle Fusion Cloud US Federal Financials](#)

is part of our Cloud ERP and is an integrated suite of applications that support the unique needs of the Defense Department. It provides efficient and compliant accounting and operational processes that deliver speed, simplicity, and savings, helping agencies achieve clean audit opinions. Modern technologies allow federal agencies to manage vast amounts of data more efficiently, access new insights, and intelligently automate mundane,

resource-intensive tasks. Defense organizations can overcome resource constraints, increase evidence-based decision-making, and accelerate responsiveness to provide better services that benefit taxpayers and meet digital modernization goals.





Embracing Oracle's AI and ML solutions enables agencies to leverage the data they already have, automating processes and creating opportunities for better optimization and improved efficiency.

## Deliver decisive insights with federal financials

Modernize your financial system with an integrated financial management solution designed for defense organizations in a secure, modern, and cost-effective cloud environment.

[Explore Oracle Cloud ERP](#)



## 4 Scenario plan to conquer complexity

It is crucial that DOD can scenario plan their budget against various situational factors that impact their mission. For example, if a Service was running operational planning scenarios on the costs associated with deploying an entire Air Wing, they would need a robust tool that can support the complexity and many levels of data. They would also need AI algorithms to synthesize weather impact on equipment and personnel. With Oracle Fusion Cloud Enterprise Performance Management (EPM) you get prebuilt financial intelligence for sophisticated what-if modeling. Leverage the solution's scenario planning tool that gives finance the agility to model multiple "what-if" scenarios based on funding, equipment, and personnel, and assess how to best respond to each one for mission readiness.

Once you have your budget, this same tool needs to help track execution against budget during the fiscal year. All services and agencies need this capability to better manage their fiduciary responsibility. Oracle Cloud EPM supports robust scenario and the entire DOD planning, programming, budgeting, and execution process.

Oracle Cloud EPM synthesizes data and insights to help you understand how well all your agencies are operating at any given moment, enabling more-intelligent planning and decision-making. Intelligence dashboards, AI-driven data analysis, and rule-based financial consolidation enable informed forecasting, modeling, and reporting

within and across agencies. Analysts can use Oracle's user-friendly tools for contingency planning and recovery scenarios, helping to prepare for the next disruption.



### Improve performance with connected planning

Model and plan across finance, HR, supply chain, and programs, streamline the budgeting process, drive better decisions, and advance your mission.

[Explore Oracle Cloud EPM](#)

## 5 Improve cyber-readiness

DOD is facing persistent and increasingly sophisticated malicious cyber campaigns globally. In order to keep pace, the President issued an [Executive Order on Improving the Nation's Cybersecurity](#), in May 2021. The DOD is listing decisive steps to modernize its approach to cybersecurity, including adopting cybersecurity best practices; advancing toward zero trust architecture and accelerating movement to secure cloud services, like SaaS. [Source](#)

In the Oracle SaaS Cloud, we take a “defense in depth” approach in building, deploying, and managing our SaaS Fusion applications. Oracle Software Security Assurance, Oracle’s methodology for building security into the design, build, testing, and maintenance of its products, is followed during the service development phases and an additional detailed review (Corporate Security Solution Assurance Process) that includes a detailed focus on deployment security is performed. Access controls are put in place to enable the customer to restrict access of their users to specific parts of the Fusion applications. Access to Oracle SaaS-operations personnel is strictly controlled and in the case of Fusion applications can include the use of “Breakglass” that allows the customer to grant temporary database access to Oracle operations staff for emergency corrective action. Multiple detection points are implemented and monitored. These are not limited to just the operating system and hypervisor layer, but also at the network and applications layers as well. In addition, we require and

place multiple security operational controls to ensure availability, redundancy, and hardening for all Oracle-managed access points. And, last but not least, we perform and leverage advanced analytics across logs received from the entire stack and not just one individual layer.

As part of Oracle’s SaaS applications cloud subscription, Oracle provides infrastructure patching and support from the hardware all the way up to the application tier. Oracle Fusion Cloud Applications suite was developed with a focus on security first, given the high number of customers in Government and Financial Services. Our application architecture is designed to meet data protection, scalability, and performance goals to meet service expectations of customers like the DOD. As part of a global ecosystem, Fusion Applications can be connected and integrated to multi-cloud environments and other systems.

Oracle’s DISA IL4-authorized cloud environments support the DOD’s strategic objectives across multidomain warfighting capability and civilian mission-critical workloads. With Oracle, DOD Joint Forces can decisively maneuver and mobilize air, land, sea, space, and cyber capabilities in response to adversaries. [Source](#)

**Read the E-book**

## 6 Operationalize information for mission execution

Operational planners, warfighters, and military decision-makers need access to data that can be transformed into actionable information in real time to ensure dependable mission execution. In order to have confidence in their decisions, they need to leverage all data: financial, supply, personnel and operational. Unfortunately, siloed HR, finance, and operations systems have created mismatched data, making it difficult to have full visibility and accurate information to make critical decisions quickly. Therefore, modernizing old systems and moving to commercial cloud computing that leverages a unified data model needs to be a priority for DOD and a critical part of your digital transformation strategy.

Oracle's Fusion Cloud Applications use a unified data model to present information through a consistent user interface to ensure that data is not trapped in silos. Oracle applies data science, AI, ML, and predictive analytics to automate data analysis and provide actionable insights. The value comes from acting on those insights. The combined power of Oracle's [integrated cloud applications](#), analytics, and AI can help you innovate, simplify, and adapt to change. When you bring these solutions together, they can help make timely data and predictive and prescriptive insights available to everyone, help better decisions get made faster, and help agility become the norm in your operations. Our SaaS cloud applications also serve as a modern digital mission partner and allow DOD to move this critical operational data from our unified data model out to external data lakes to further analyze and model the data with third-party AI and ML tools.

DOD made cloud computing a fundamental component of their global information technology infrastructure and modernization strategy. With battlefield success increasingly reliant on digital capabilities, cloud computing satisfies the warfighters' requirements for rapid access to data, innovative capabilities, and assured support.

[Source](#)

**Accelerate data-driven insights and decision making to the tactical edge and beyond with cloud applications**

**Condensing the OODA (Observe-Orient-Decide-Act) loop for faster decision-making support.**

[Explore Oracle Cloud Applications](#)



# Converging mission effectiveness

To meet critical mission needs, DOD is investing in the modernization of legacy systems and digital transformation. The adoption of cloud and advanced technologies is the foundation for this entire modernization effort to build needed capabilities for better mission outcomes. DOD's digital transformation is driven through innovation and delivery of resilient software capabilities at the speed of relevance. That's why defense organizations are moving to [Oracle's integrated cloud native applications](#) that are designed and built to work together, providing the Defense Department with improved transparency, enhanced collaboration, and the needed capabilities to help

- Recruit, develop and retain top-tier talent
- Ensure supply chain resiliency
- Provide audit-ready fiduciary management
- Scenario plan to conquer complexity
- Improve cyber-readiness
- Operationalize information for mission execution

Many defense organizations are in the midst of their digital modernization and transformation journey, and each implementation is unique. Oracle examines each customer's needs and charts a course to help them achieve their vision. Oracle can complement your on-premises footprint, cloud journey, or cloud footprint and deliver seamless, optimized strategic value across your enterprise.

**Learn more about Oracle Cloud Applications for the Defense Department.**

[Learn more](#)

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