

Defense Enterprise Accounting and Management System (DEAMS)



The Defense Enterprise Accounting and Management System (DEAMS) program has developed an operationally representative integrated test environment, addressing a long-standing DOT&E recommendation. The Air Force Operational Test and Evaluation Center should perform a DEAMS verification and validation (V&V) of its integrated test environment to determine its level of operational representativeness. The results should be used to develop a more operationally representative test strategy to support agile development of new capabilities.

SYSTEM DESCRIPTION

DEAMS is a Defense Business System that uses commercial off-the-shelf (COTS) enterprise resource planning software to provide accounting and financial management services.

The DEAMS Program Management Office (PMO) is following an agile acquisition strategy that adds additional capabilities and users incrementally. DEAMS serves an estimated 16,600 end-users at approximately 170 locations worldwide.

MISSION

DEAMS is intended to deliver accurate, reliable, timely, and auditable financial management information compliant with governing laws, regulations, and policies. DEAMS performs the following core accounting functions:

- Financial System Management
- General Ledger Management
- Funds Management
- Payment Management
- Receivable Management
- Cost Management
- Reporting

Air Force financial managers and tenant organizations use DEAMS to do the following across the Department of the Air Force, the U.S. Space Force, and their supported Combatant and Field Commands:

- Compile and share accurate, up-to-the-minute financial management data and information
- Satisfy congressional and DOD requirements for auditing of funds, standardizing of financial ledgers, timely reporting, and reduction of costly rework

PROGRAM

DEAMS was designated as an Agile Software Development (ASD) pilot program in the FY 2019 National Defense Authorization Act. DEAMS adopted the Scaled Agile Framework (SAFe®) to facilitate agile software development. During FY22, DEAMS completed 4 agile program increments of approximately 15 weeks each, which resulted in deployments of updates to already fielded capabilities.

» MAJOR CONTRACTOR

- CACI – Dayton, Ohio

TEST ADEQUACY

The DEAMS program recently developed a more operationally representative integrated test environment to support shortened development and deployment cycles enabled by agile software development methods. Following FOT&E in FY24, the DEAMS program intends to deploy new capabilities to new user sets in major acquisition commands in FY24. Due to the implementation

of the SAFe® agile software development:

1. The approved TEMP for DEAMS is out of date and requires an update.
2. A V&V of the operational representativeness of the DEAMS integrated test environment is needed.
3. An Agile Operational Master Test Plan (AOMTP) with sufficient detail to conduct adequate operational tests of the upcoming DEAMS capability deployments is needed.

PERFORMANCE

» EFFECTIVENESS

In FY20, DOT&E reported that the DEAMS program deployed a software upgrade. The software upgrade introduced a significant number of major software deficiencies that has compromised the operational effectiveness of DEAMS. A significant factor precluding discovery of major software deficiencies prior to deployment was due to limitations in the integrated test environment. In previous DEAMS deployments, operational testing has been conducted after deployment of capabilities.

DEAMS implementation of the SAFe® development is facilitating a software development environment that can focus on faster resolution of critical software deficiencies. However, the DEAMS program has limited resources and cannot rapidly fix

some of the software deficiencies. Areas impacting operational effectiveness of the DEAMS program from previous operational testing include:

- Lack of timeliness of displayed information to users
- Problems resulting from software obsolescence and a major system software upgrade
- The need to modernize existing payment processes

» SUITABILITY

In FY20, DOT&E recommended that site-specific workflows are needed to improve the usability of DEAMS. The DEAMS AOMTP should contain a test strategy that will evaluate site-specific operational

needs for existing users and future user deployments.

» SURVIVABILITY

DEAMS remains not operationally survivable based upon previous operational tests. In the FY20 DOT&E Annual Report, DOT&E recommended that the DEAMS PMO address cybersecurity vulnerabilities that present a high risk to DEAMS missions.

RECOMMENDATIONS

The Air Force should:

1. Perform a V&V of the operational representativeness and realism of the DEAMS integrated test environment.

The Air Force Operational Test and Evaluation Center should provide a report that details any deficiencies in the integrated test environment that would preclude use of the integrated test environment for adequate operational testing prior to FOT&E in FY24 and deployment of new capabilities.

2. Submit an AOMTP and a TEMP update to DOT&E for approval to support the next planned capability deployment to new users in FY24.
3. Conduct a cooperative vulnerability and penetration assessment in FY24 to evaluate cyber survivability of DEAMS missions.