Defense Enterprise Accounting and Management System (DEAMS)

The Defense Enterprise Accounting and Management System (DEAMS) Program Management Office (PMO) continues to refine its implementation of the Scaled Agile Framework (SAFe) to improve the delivery of accounting management software, but the operational test strategy in the previously approved TEMP is out of date. DEAMS's operational effectiveness, suitability, and survivability have not been fully assessed since FY16, and DEAMS remains not survivable. The DEAMS PMO has improved its integrated test environment, and the Air Force should perform verification, validation, and accreditation (VV&A) of that environment to determine its level of operational representativeness. The results should be used to develop a more operationally representative test strategy to guide agile development and fielding of new capabilities and software fixes.

SYSTEM DESCRIPTION

DEAMS is a defense business system that uses commercial off-the-shelf enterprise resource planning software to provide accounting and financial management services.

The DEAMS PMO is following an agile acquisition strategy that adds capabilities and users incrementally. DEAMS serves a user base of up to 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 U.S. 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 is a Business Acquisition Category I program of record. In FY18, DOT&E approved a TEMP for DEAMS Increment 1, which defined a non-agile test strategy. The approved TEMP does not detail any operational test events beyond FY18. DEAMS was designated as an Agile Software Development Pilot Program in the FY19 National Defense Authorization Act. In FY20, the DEAMS PMO adopted SAFe to facilitate agile software development. As of the end of FY24, the DEAMS PMO has not completed a TEMP update. During FY24, DEAMS continued the approach started in FY20 of completing four agile program increments of approximately 12 weeks each, which resulted in deployment of incremental updates to previously fielded capabilities.

» MAJOR CONTRACTOR

- CACI International, Inc. – Dayton, Ohio

TEST ADEQUACY

The DEAMS PMO developed a more operationally representative integrated test environment to support shortened development and deployment cycles and is executing a cloud migration strategy. The DEAMS PMO intends to deploy new capabilities to new user sets starting with major acquisition commands in FY25. The Air Force needs to conduct a risk assessment in accordance with DOT&E guidance to determine the scope of the FOT&E for these limited deployments planned to start in FY25. As reported in recent DOT&E Annual Reports, the following problems, resulting from SAFe software development implementation, still must be addressed:

- The approved DEAMS TEMP is out of date and does not detail an agile development test strategy. An update to the DEAMS TEMP is required to address future FOT&E of new capabilities being agilely fielded and/or new user deployments.
- The operational representativeness of the DEAMS integrated test environment is unknown because the Air Force has not yet conducted a VV&A of the environment.
- An Agile Operational Master Test Plan (AOMTP) is needed with sufficient detail to conduct adequate operational tests of the upcoming DEAMS capability deployments.

PERFORMANCE

» EFFECTIVENESS

The FY22 Annual Report noted some areas reducing the operational effectiveness of DEAMS identified during previous operational testing. The DEAMS PMO is using agile development methods to improve the following:

- Timeliness of displayed information to users has improved due to fixes in data replication performance.
- Faster resolution of critical software deficiencies, prioritization of the backlog of software deficiencies, and enhancements by the implementation of SAFe.

» SUITABILITY

DEAMS remains not operationally suitable based upon previous operational tests. In FY20, DOT&E recommended that site-specific workflows be developed to improve the usability of DEAMS. The DEAMS TEMP update and AOMTP should implement an agile test strategy that will evaluate site-specific operational needs for existing users and future user deployments.

» SURVIVABILITY

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

RECOMMENDATIONS

The Air Force should:

1. Conduct a cooperative vulnerability and penetration assessment and an adversarial assessment to measure the program's progress towards cyber survivability, as discussed in the FY22 and FY23 Annual Reports.

2. Perform a VV&A of the operational representativeness and realism of the DEAMS integrated test environment prior to planned capability deployments starting in FY25, as discussed in the FY22 and FY23 Annual Reports.

3. Submit an AOMTP and an updated TEMP to DOT&E for approval to support the planned capability deployments to new and existing users starting in FY25, as discussed in the FY22 and FY23 Annual Reports.