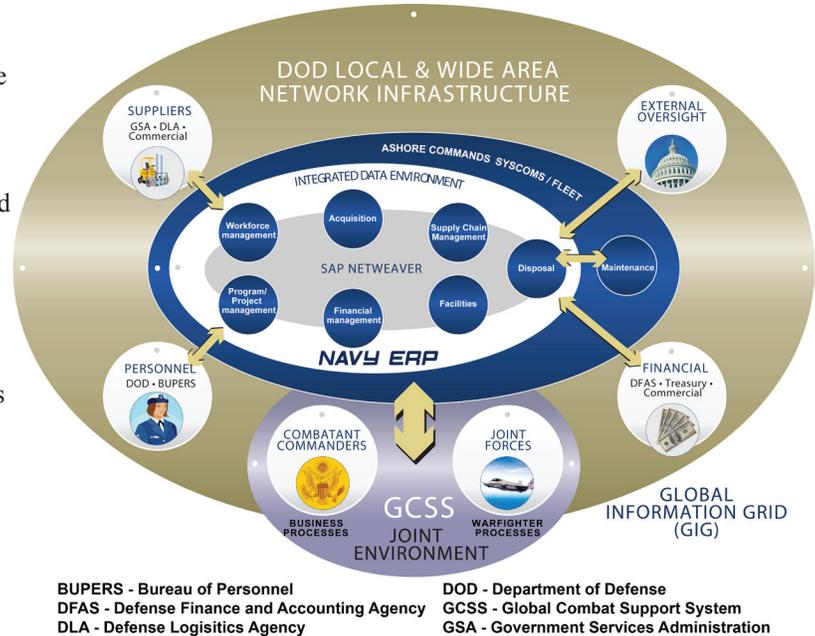


Navy Enterprise Resource Planning (ERP) Program

Executive Summary

- The Commander, Operational Test and Evaluation Force (COTF) conducted an IOT&E of Navy Enterprise Resource Planning (ERP) Single Supply Solution Release 1.1 September 22 to November 5, 2010, with actual users in a live environment.
- A Naval Information Operations Command (NIOC) Red Team identified and attempted to penetrate and exploit system information assurance (IA) vulnerabilities during IOT&E.
- DOT&E determined that Release 1.1 is operationally suitable with limitations and that operational effectiveness cannot be resolved until the system attains a greater degree of maturity and stabilization.
- The Navy ERP Program Manager developed a plan of action and milestones to resolve deficiencies and scheduled an FOT&E for May 2012 that will include testing of the critical Initial Source Processing Time (ISPT) Key Performance Parameter (KPP) and several new capabilities.



System

- The Assistant Secretary of the Navy (Financial Management and Comptroller) approved Navy ERP on October 1, 2008, as the Financial System of Record for current users and “all future users of this system.” The Navy will use the system to manage more than one-half of their Total Obligation Authority.
- Navy ERP is an integrated mission support hardware and software system providing financial transparency and total asset visibility across the Naval enterprise. Navy ERP uses a commercial off-the-shelf product, configured to integrate with Navy and DoD requirements, that unifies and streamlines mission support activities using a common data set, available in near-real-time.
- The Navy has implemented the system in two releases: (1) Financial and Acquisition Management and (2) the Single Supply Solution. The system will serve more than 71,000 users at more than 120 locations around the world. The program office has been tasked to investigate the requirements for implementing the system in an additional 14 Navy commands in future years.

- The system supports the Navy’s ability to produce auditable financial statements, enabling compliance with federal financial and security standards, the Chief Financial Officers Act of 1990, and the DoD Information Assurance Certification and Accreditation Process.

Mission

The Navy Component Commander will utilize Navy ERP to:

- Implement an ERP business management system for the Navy to modernize and standardize financial, workforce, and supply chain management across the Naval Enterprise
- Improve decision-making by the Navy’s leadership, enabling more effective and efficient support of naval forces

Major Contractors

- International Business Machines (IBM) – Bethesda, Maryland
- Deloitte – New York, New York

Activity

- COTF conducted an IOT&E of Navy ERP Single Supply Solution Release 1.1 from September 22 through November 5, 2010. The evaluators observed live business operations at Naval Supply Systems Command (NAVSUP) depots in Philadelphia and Mechanicsburg, Pennsylvania.
- COTF also monitored a Continuity of Operations exercise at the Navy ERP alternate data center at China Lake, California.
- During IOT&E, the NIOC Red Team performed IA system scans, penetration testing, and malicious insider analysis. COTF conducted all testing in accordance with

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the DOT&E-approved Test and Evaluation Master Plan and operational test plan.

- The Navy began deployment of Navy ERP Release 1.1 to Fleet and Industrial Supply Centers in July 2011. The first Fleet and Industrial Supply Center deployment added an additional 311 users to Navy ERP, representing 8 percent of the total Single Supply Solution users.

Assessment

- DOT&E determined that Release 1.1 is operationally suitable with limitations and that operational effectiveness cannot be resolved until the system attains a greater degree of maturity and stabilization.
- The Navy ERP system had gone through a six-month stabilization period prior to entering IOT&E, yet the system was still too immature for a complete assessment. COTF could not meaningfully measure the principal objective criterion, the ISPT KPP, because only one of three material groups had migrated to the new system.
- The system was able to achieve 18 of 22 NAVSUP stabilization conditions, as well as provide new functionality to conduct supply business; however, there were some capabilities that had significant problems or were not available. A combined Navy ERP/NAVSUP Business Office employed excellent change management techniques, but ERP data conversion still proved to be a challenge that required substantial manual effort.
- Navy ERP uses a standard Intermediate Document (IDOC) format to exchange transactions between Navy ERP and external customer systems. To protect against populating the system with bad information, Navy ERP performs a validity check on all incoming transactions. NAVSUP subject matter experts researched IDOCs that failed validation to determine the reason for failure and how to correct them. Although this is a desired, normal part of the business process, the approximate 9 percent failure rate was high enough to

produce a backlog of failed IDOCs that remained steady at 40,000 throughout IOT&E. This IDOC backlog significantly increased NAVSUP workload.

- While the process to manage defects and trouble tickets was sound, the large volume of trouble reports, coupled with system complexity, created a backlog of open defects that the Navy was not able to work through during the evaluation period. The defect backlog remained steady at just over 500 throughout IOT&E. The program manager was able to reduce the backlog to fewer than 300 defects following the IOT&E; however, the backlog has increased to 500 defects, as of September 2011, following the deployment of Navy ERP to the Fleet and Industrial Supply Centers in July 2011.
- Reliability, availability, and maintainability metrics easily met their thresholds. Furthermore, NIOC Red Team testing showed that Navy ERP maintained a very good security posture with no significant vulnerabilities found.
- The Navy ERP Program Manager developed a plan of action and milestones to resolve deficiencies and scheduled an FOT&E for May 2012 that will include testing of the critical ISPT KPP and several new capabilities.

Recommendations

- Status of Previous Recommendations. The program office corrected many deficiencies found during the integrated developmental/operational testing prior to IOT&E and is currently working to stabilize the system and correct additional deficiencies noted during the IOT&E.
- FY11 Recommendation.
 1. The scheduled FOT&E should proceed once the program manager has corrected identified deficiencies, the Navy has deployed the rest of the Single Supply Solution capabilities, and the system is stable enough to continue operational testing.