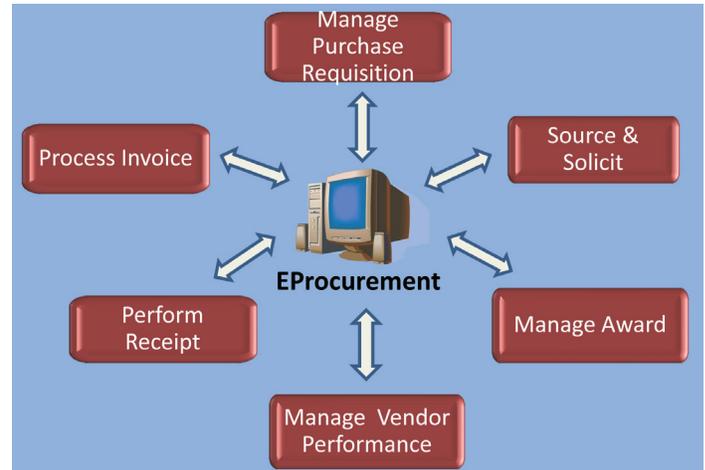# EProcurement

Executive Summary
- The Joint Interoperability Test Command (JITC) conducted a DOT&E-directed Operational Assessment (OA) of Release 1.2 in January 2012. EProcurement demonstrated significantly improved maturity over the previous Release 1.1. Users could successfully employ the system to execute all phases of procurement mission tasks with few problems. However, user perception of training adequacy, system usability, and system timeliness remained poor.
- JITC conducted the IOT&E of Release 1.2 between February and April 2012.
- EProcurement is operationally effective. The effectiveness evaluation concentrated on the users' ability to use EProcurement in six areas: manage purchase requisitions, source and solicit goods and services, manage awards, process receipts and invoices, create reports, and maintain system data (data cleansing and conversions). JITC observed users performing day-to-day operations and recorded 1,350 successful transactions and 13 failed transactions (99 percent success rate).
- EProcurement is operationally suitable, but with deficiencies. Improvements are required in the areas of training, usability, Help Desk operations, and supportability.
- EProcurement is secure from an Information Assurance perspective. At the end of IOT&E, only one moderate impact, and two low impact deficiencies remained open, with minimal effect on system security and operations. The Defense Information Systems Agency (DISA) and the Defense Logistics Agency (DLA) created a plan of action and milestones to address resolution of these deficiencies. However, DOT&E was unable to verify that DLA has a robust theft and fraud prevention and detection program.
- The Deputy Chief Management Officer (DCMO) approved the Full Deployment Decision (FDD) of EProcurement on August 23, 2012. As a part of the FDD approval, DLA agreed to employ a Red Team to conduct a pilot assessment in accordance with the rules of engagement established by the results of the DCMO-sponsored Massachusetts Institution of Technology Theft/Fraud Red Team study. DLA also agreed to continue the effort to demonstrate automated regression testing as a potential standard model for the DoD.

System
- DLA developed EProcurement to provide enterprise-level procurement capabilities to replace legacy procurement systems (Pre-Award Contracting System, Electronic Contract

Folder, Procurement Automated Contract Evaluation, and Base Operations Support System).
- The Intended functions of EProcurement include: manage purchase requisition, source and solicit, manage award, manage vendor performance, perform receipt, and process invoice. Receipts and invoices are processed via the DLA Wide Area Workflow System or manually.
- EProcurement is based on a suite of commercial off-the-shelf (COTS) software applications purchased from the Systems Applications and Products Corporation that operates on COTS computing hardware.
- The Defense Enterprise Computing Center (DECC) in Ogden, Utah, which is operated and maintained by DISA, is the production environment for EProcurement. EProcurement is one of the programs in the overall DLA Enterprise Business System Infrastructure hosted by the Ogden DECC. The back-up site is located at the DECC in Mechanicsburg, Pennsylvania.

Mission
DLA users will use EProcurement to procure and provide the full spectrum of consumables, services, and depot-level repairables to the Army, Navy, Air Force, Marine Corps, other federal agencies, and combined and allied forces.

Major Contractor
Accenture – Reston, Virginia

Activity
- JITC conducted an OA of Release 1.2 in January 2012, in accordance with a DOT&E-approved OA plan. JITC conducted the OA at the DLA Aviation facility in Richmond, Virginia.
- JITC conducted the IOT&E of EProcurement Release 1.2 from February through April 2012. JITC executed the test at DLA locations in New Cumberland, Pennsylvania; Mechanicsburg, Pennsylvania; Battle Creek, Michigan; Fort Belvoir, Virginia; and Richmond, Virginia, in accordance with a DOT&E-approved IOT&E plan.
- Information Assurance testers from JITC along with members of the DISA Field Security Operations (FSO) and DLA Computer Emergency Response Team (CERT) conducted penetration test events at the DECC in Ogden, Utah, during both the OA and IOT&E.

Assessment
- During the Release 1.2 OA, EProcurement demonstrated significantly improved maturity over the previous Release 1.1. Users successfully used the system to execute all phases of procurement mission tasks with few problems. However, user training, system usability, and system timeliness still require improvement.
- Based on the IOT&E results, EProcurement is operationally effective.
  - The effectiveness evaluation concentrated on the users' ability to use EProcurement to: manage purchase requisitions, source and solicit goods and services, manage awards, process receipts and invoices, create reports, and maintain system data (data cleansing and conversions), which included all major system functionality.
  - JITC observed users performing day-to-day operations and recorded 1,350 successful transactions and 13 failed transactions, which achieved a 99 percent success rate and exceeded the 90 percent requirement.
  - EProcurement is interoperable. JITC interoperability testers evaluated 52 interfaces to assess the data exchanges between EProcurement and other systems, with no failures reported in the more than 400 transactions evaluated.
- EProcurement is operationally suitable but has deficiencies in the areas of training, usability, Help Desk operations, and supportability.
  - DOT&E considers EProcurement reliable, available, and maintainable. DLA reported one site specific outage at Battle Creek, Michigan, lasting 1 hour and 55 minutes, but it appears to have been an isolated event.
  - EProcurement training, training aids, and system documentation need improvement. None of these areas met the 80 percent threshold of acceptability by the users surveyed. Users report that EProcurement is not user friendly and is difficult to master.
  - Help Desk trouble tickets take a long time to resolve. Analysis of the closure rates for the tickets shows that the average time required to resolve trouble tickets was

approximately 8.5 days, with resolution times ranging from less than 5 minutes to nearly 40 days.
  - The supportability of EProcurement needs improvement as DLA does not have an automated test capability to perform thorough regression testing on new software releases.
- EProcurement meets Information Assurance security thresholds. JITC Information Assurance testers, along with members of the DISA FSO and DLA CERT, conducted a series of penetration test events primarily at the Ogden DECC.
  - Following IOT&E, only one moderate impact, and two low impact deficiencies remained open, with minimal effect on system security and operations. DISA and DLA created a plan of action and milestones to address resolution of these deficiencies.
  - DLA did not implement a robust theft and fraud prevention and detection program. DLA asserts that by using role separations, at least two to three people would need to be involved in any theft or fraud activity and that while large-scale theft or fraud was not impossible, it would be difficult. DLA also indicated that bi-annual audits and other accounting controls are in place to further mitigate such activities. While DOT&E acknowledges that some level of prevention and detection is available at DLA, the extent of the financial threat vulnerability is yet to be determined and is pending the outcome of a financial theft and fraud test.

Recommendations
- Status of Previous Recommendations. The program manager satisfactorily addressed three of the five FY11 recommendations. The program manager partially addressed recommendations concerning operational realism of developmental testing and the use of automated test tools; these recommendations remain valid.
- FY12 Recommendations.
  1. DLA should employ a Theft and Fraud Prevention and Detection Red Team to conduct a pilot assessment in accordance with the rules of engagement established by the results of the Deputy Chief Management Officer-sponsored Theft and Fraud Red Team study.
  2. DLA should continue with ongoing efforts to implement automated regression testing.
  3. DLA should improve the quality of training, training aids, and other system documentation for the users, and include role-specific training in the future when DLA transitions users to EProcurement at the remaining DLA sites.
  4. DLA should modify the method of managing trouble tickets to allow for better query capabilities. DLA should also periodically track the resolution times of system problems to aid DLA management in identifying potential problem areas so that DLA can implement mitigation strategies before productivity is affected.
  5. DLA should periodically administer the System Usability Scale survey to a random sample of all EProcurement users

through full deployment to see whether user satisfaction does improve with increased system use and to pinpoint any inherent deficiencies with system usability.

6. In future testing, JITC and DLA should evaluate all untested interfaces that will be part of the full deployment.

7. Although only minor deficiencies remained after the last Information Assurance test event, the DISA FSO and DLA CERT should periodically reevaluate the security posture of the system as part of the overall defense-in-depth security strategy.