



To enhance mission performance, TSA is committed to promoting a culture founded on its values of Integrity, Innovation and Team Spirit.

1. **PURPOSE:** This directive provides TSA policy and procedures for Test and Evaluation (T&E) to be performed throughout the system acquisition process.
2. **SCOPE:** This directive applies to all TSA acquisition programs.
3. **AUTHORITIES:**
 - A. [DHS Directive 102-01, Acquisition Management Directive](#)
 - B. [DHS Directive 026-06, Test and Evaluation](#)
 - C. [TSA MD 300.8, Acquisition Program Review and Reporting](#)
4. **DEFINITIONS:**
 - A. **Acquisition Strategy:** A business and technical management approach designed to achieve program objectives within the resource constraints imposed. It is the framework for planning, directing, contracting for, and managing a program. It provides a master schedule for research, development, test, evaluation, production, fielding, modification, post-production management, and other activities essential for program success.
 - B. **Combined Developmental Test and Operational Test (DT/OT):** A single event that produces data to address DT and OT system issues. A combined DT/OT is usually conducted as a series of distinct DT and OT phases at a single location using the same test items.
 - C. **Component Acquisition Executive (CAE):** The CAE is a single official within a component that is responsible for all acquisition functions within that component.
 - D. **Critical Operational Issues and Criteria (COIC):** Key operational concerns (the issues) of the decision-maker/user representative, with bottom line standards of performance (the criteria) that, if satisfied, signify the system is operationally ready to proceed beyond the Acquisition Decision Event (ADE) 3 review.
 - E. **Developmental Test:** Any engineering test used to verify the status of technical progress, verify that design risks are minimized, substantiate achievement of contract technical performance, and certify readiness for Initial Operational Test and Evaluation (IOT&E).
 - F. **Director of Operational Test and Evaluation:** Develops and manages DHS test and evaluation policy and procedures.

- G. Initial Operational Test and Evaluation: The dedicated field test, under realistic conditions, of production or production-representative items of security equipment to determine operational effectiveness and suitability for use by representative end-users.
- H. Integrated DT/OT: A single phased event that generates data to address developmental and operational issues simultaneously under operational conditions. A special case of a combined DT/OT. This event's execution strategy is based on program requirements.
- I. Key Performance Parameter (KPP): Those capabilities or characteristics considered essential for successful objective accomplishment.
- J. Operational Effectiveness: The overall degree of system mission accomplishment when used by representative personnel in the expected (or planned) environment.
- K. Operational Suitability: The degree to which a system can be satisfactorily placed in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, maintainability, safety, human factors, manpower supportability, logistic supportability, and training requirements.
- L. Operational Test: Any testing conducted with the production or production like system in realistic operational environments, with users that are representative of those expected to operate, maintain, and support the system when deployed.
- M. Operational Test Readiness Review (OTRR): A review conducted by the Operational Test Agent (OTA) to the Component Acquisition Executive (the Chair) prior to each operational test. The purpose is to identify issues that may impact successful test execution.
- N. Oversight: Level 1, or specially designated Level 2 and 3 programs that are monitored by the DHS Director, Operational Test and Evaluation.
- O. Reliability, Maintainability, and Availability (RMA): Three separate metrics used to help assess overall system suitability. Typical factors include mean time between critical failure(s), mean time to repair, and operational availability.
- P. System Evaluation Report (SER): An independent, integrated evaluation of a system using information from DT, OT, and other relevant and credible sources. The OTA produces the SER.
- Q. System Evaluation Team (SET): The OTA's multidisciplinary test team chaired by the System Evaluator that is responsible for scoping test efforts, planning and executing test events, and creating the SER.
- R. Test and Evaluation Integrated Product Team (T&E IPT): A working group, chaired by the Program Manager (PM) or designee, chartered to ensure that the T&E planning, execution, and reporting are directed toward efficiently achieving program goals in line with the acquisition strategy.

S. Test and Evaluation Master Plan (TEMP): The overarching document that outlines the program's T&E strategy. The DOT&E approves the TEMP for oversight programs.

5. RESPONSIBILITIES:

A. The CAE or designee is responsible for:

- (1) Serving as the Acquisition Decision Authority (ADA) for Acquisition Level 3 and delegated Level 1 and 2 programs.
- (2) For non-delegated Level 1 and 2 programs, chairing the TSA Acquisition Review Board (ARB) and provide the TSA recommendation to the DHS Investment Review Board (IRB).
- (3) Approving Level 3 program TEMPs, and endorse Level 1 and 2 program TEMPs.
- (4) Providing empowered membership to the T&E IPT and System Evaluation Team(s) as required.
- (5) Chairing the Operational Test Readiness Review (OTRR).

B. The PM is responsible for:

- (1) Coordinating the overall program acquisition and T&E strategies.
- (2) Developing and maintaining the TEMP.
- (3) Managing all DT performed by the contractor or Government during system development.
- (4) Ensuring completion and distribution of DT plans and reports through the T&E IPT.
- (5) Providing T&E resources, to include:
 - (a) Budgeting and funding;
 - (b) Supplying test articles; and
 - (c) Scheduling T&E activities into the program schedule.

C. OTA is responsible for:

- (1) Planning, conducting, and reporting independent of the PM and user representative, an operational test and evaluation of Level 1 and selected DHS programs.
- (2) Producing the SER.

D. The T&E IPT is responsible for:

- (1) Formulating a credible, appropriate T&E strategy for each system, and documenting the coordinated strategy in the TEMP.
- (2) Documenting COICs and DT/OT entrance criteria in the TEMP.
- (3) Ensuring that T&E activities are executed in accordance with the TEMP.
- (4) Supporting the program mission and requirements as outlined in the following documents developed outside of the T&E IPT:
 - (a) Mission Need Statement (MNS)
 - (b) Acquisition Program Baseline (APB)
 - (c) Concept of Operations (CONOPS)
 - (d) Operational Requirements Document (ORD)
 - (e) Functional Requirements Document (FRD)
- (5) Providing input to program schedules.
- (6) Identifying and recommending the independent Operational Test Agent (OTA) for DOT&E approval for oversight programs.

E. The User Representative (Program Sponsor) is responsible for:

- (1) Providing empowered membership to the T&E IPT.
- (2) Serving as the primary subject-matter expert on operational process and procedures.
- (3) Developing operational system requirements, CONOPS, and training plans.
- (4) Coordinating with the DT/OT communities on test threat representation.
- (5) Endorsing the TEMP.
- (6) Participating in test readiness reviews.
- (7) Assisting with COIC development.
- (8) Providing appropriate test locations and personnel.

F. The OTA management is responsible for:

- (1) Providing independent operational assessments and evaluations in support of ADE reviews as appropriate.
- (2) Endorsing the TEMP.
- (3) Approving event specific-test plans and reports.
- (4) Producing the Operational Test Plan for oversight programs.
- (5) Conducting OTRRs on behalf of the CAE and providing minutes documenting actions and decisions.
- (6) Ensuring personnel meet appropriate T&E certification levels.
- (7) Approving the T&E concept.

G. The SET is responsible for:

- (1) Producing a Risk Assessment (RA) to scope T&E efforts for system acquisition efforts at each acquisition milestone or significant capability upgrade on existing systems.
- (2) Recommending TEMP concurrence/non-concurrence to the OTA Director.
- (3) Planning, conducting and reporting on test events in accordance with the TEMP.
- (4) Conducting OTRRs on behalf of the CAE and providing minutes documenting actions and decisions.
- (5) Producing the SER in accordance with the timelines set forth in the TEMP.

6. POLICY:

- A. The T&E strategy must compliment the acquisition strategy. TSA accomplishes its T&E objectives through integrated test and evaluation. Evaluation planning is focused at the system or system of systems level with the objective of determining, in a realistic operational environment, whether a system's functionality and integration is operationally effective in accomplishing the overall security mission and is suitable for use by the user community and the travelling public.
- B. The OTA shall document all of their plans and reports as they accomplish integrated T&E objectives. The primary planning documents are the TEMP, the System Evaluation Plan (as required), the DT plans and the Operational Test Plan (OTP). The principal OTA product generated from integrated T&E activities is the SER that is provided to the Acquisition Decision Authority (ADA) before each ADE within the system's acquisition life cycle.
- C. All OTA T&E documents shall be approved by the OTA management before release to external organizations.

- D. The OTA shall consider using Modeling and Simulation (M&S) while planning all T&E.
- E. When developing T&E strategies, the T&E IPTs and SETs shall consider all available assets ensuring the most cost effective and complete support to the DHS acquisition community and system users. This includes a review of all TSA test facility capabilities, field engineering expertise, M&S capabilities, resources (manpower and funding), and instrumentation. Human-Systems Integration (HSI) support is provided to TSA by various test personnel with the appropriate experience.
- F. The OTA shall conduct performance (cost/schedule) measurement on all T&E programs to aid in future agency resource planning. The level of T&E required, which is documented in the RA, is recommend as the basis for this performance measurement.
- G. TSA T&E community shall comply with the policies as outlined in TSA's Occupational Safety, Health, and Environment Division documentation. All T&E plans will consider the safety and well-being of TSA personnel, test-player personnel, the travelling public, and support contract personnel during the conduct of any T&E event. An approved safety release (usually as part of the Authority to Operate (ATO) that is approved by the appropriate Assistant Administrator) is required for any test event involving end-users.
- H. Government RMA testing shall be designed to collect comprehensive RMA data under conditions that duplicate operational field conditions as closely as possible. Government developmental testing is the primary source for Reliability, Maintainability, and Availability (RMA) data.
- I. All PMO and OTA personnel involved in T&E planning and execution shall use current threat intelligence as guidance to implement the appropriate threat portrayal in all operational test events. T&E personnel must coordinate with the appropriate TSA and DHS organization(s), as well as TSA OSHE personnel to ensure that the threat represented in T&E conforms to the approved threat.
- J. The OTA shall release data as quickly as prudently possible to the appropriate members of the acquisition community, in accordance with the timelines outlined in the OA T&E implementation guide. The OTA Director retains the authority to make the final determination on the release of OT data.
- K. The system evaluation or system assessment for OT&E must be prepared independently of both the PM and user organizations.

7. PROCEDURES:

- A. The PMO will coordinate all TEMP's for approval through the CAE staff.
- B. The PMO will include the CAE staff as a member of the Program and T&E IPT(s).

- C. The OTA will formally coordinate OTRR scheduling through the CAE staff at least 14 days prior to the desired event date. The OTA request will include a current OTRR status checklist and summary of any outstanding issues.
- D. The CAE T&E representative will coordinate the OTRR Chair and DHS DOT&E schedules and meetings. The OTA is encouraged to hold pre-OTRRs to resolve issues prior to the formal OTRR as required. The OTRR Chair (through the T&E representative) reserves the right to consider appointments requested inside of 14 days on a case by case basis.
- E. The OTA will coordinate all plans and reports for oversight systems through the CAE staff for review, but not approval.
- F. The overall T&E mission essentially begins with the PMO's formation of a T&E Integrated Product Team (IPT) that formally notifies the proposed OTA of the projected system acquisition level, and provides all available system documentation. The primary objective of the T&E IPT is to develop a T&E strategy and describe it in the TEMP.
- G. Once notified of a new system start (or capability upgrade of an existing system), the OTA will form a System Evaluation Team (SET) for all TSA T&E programs to ensure the integrated coordination of all actions related to the execution of a system's T&E strategy. Smaller, non-oversight systems may have either a SET or a designated individual to monitor the T&E program.
- H. The OTA conducts a T&E Concept brief to recommend an evaluation strategy that provides initial guidance during the TEMP development and system-level evaluation plan(s). The T&E Concept Brief is a product of the OTA and reviewed by each proposed test section, along with the T&E IPT.
- I. The OTA will use data from DT and OT, along with information from any other relevant and credible events to produce integrated evaluation of the system in support of Acquisition Decision Events (ADEs) and other events as required.
- J. Based on the COIC and required data identified in the integrated evaluation strategy (as described by the TEMP), the OTA Evaluator, in close coordination with subordinate test entities, develops an integrated program of tests or other events to provide the required data to support the evaluation. The integrated test strategy can include separate DTs, independent OTs, combined and/or integrated Developmental Test (DT)/Operational Test (OT), Modeling and Simulation (M&S), and other credible events that provide data throughout the acquisition program.
- K. The objective is to develop a synergy among all planned events to efficiently provide the information for the system evaluator to analyze and report results to the decision-maker. The strategy, documented in the TEMP, supports the integrated evaluation concept, limits redundant testing, and focuses data collection on the most effective and efficient sources. To accomplish this, the system evaluator will develop a RA to determine a recommended level of T&E required supporting the Acquisition Decision. The RA will be used as a primary input in scoping the T&E strategy documented in the TEMP.

8. **APPROVAL AND EFFECTIVE DATE:** This policy is approved and effective the date of signature unless otherwise specified.

APPROVAL

Signed

December 3, 2012

Karen Shelton Waters
Assistant Administrator for Acquisition

Date

EFFECTIVE

Date

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