

Quality and Standards Team

Test And Evaluation Gold Standard Overview and Needs

Presented

To: Verification and Validation Summit Participants

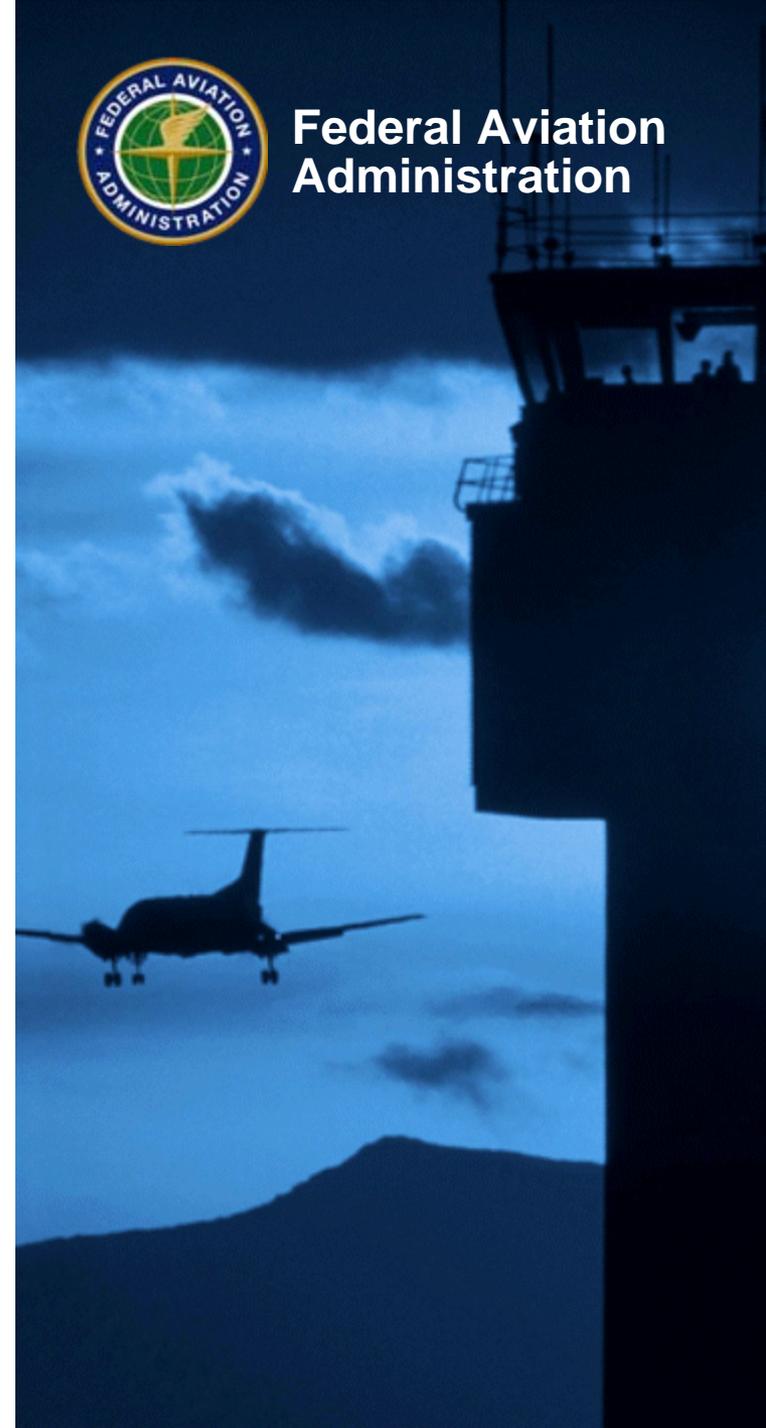
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Federal Aviation
Administration



Test & Evaluation Gold Standard (TEGS) Overview

- **What is the TEGS?**

- The TEGS is an agreed upon set of standard processes documenting the framework for how changes/modifications are incorporated into fielded NAS Products. TEGS has been approved by the ASAG and been incorporated into the AMS In-Service Management Phase (section 4.4).

- **Who Uses the TEGS?**

- The TEGS is utilized by Technical Operations, Terminal and En Route Air Traffic Organizations (ATO) performing Second Level Engineering change/modifications to NAS products being operated and maintained under the Acquisition Management System In-Service Management phase.

- **How does it Work?**

- The TEGS defines the method for performing best “Second Level Engineering (SLE)” practices capturing verification and validation decision points across the NAS modification life cycle.

- **Why is TEGS Important?**

- The TEGS provides an effective way to communicate to the field, the purpose, scope, design changes, test results and limitations of each modification. It is also a valuable process in the conduct of Safety Risk Management and has been endorsed by the ATO Safety Service.

TEGS Process Phases

Define It

Provides detailed descriptions of the objectives, validated needs and requirements for the release/modification. Safety Management System Assessment and Information Systems Security verification are also activities in this phase

Design It

Development and validation of detailed design specifications, test plans, tools, and environment upgrades leading into system development.

Build It

Verification that the release/modification meets specified requirements and interrelated functions are not adversely affected

Test It

System testing, functional verification, and preparation for Key Site

Key Site/ National Deployment

Introduction of the release/modification into an operational environment to assess and verify operational suitability and documentation of the release/modification

Test & Evaluation Gold Standard Reengineering

- **Why Reengineer the TEGS?**

- Inconsistent Implementation of the T&E Gold Standard
- Lack of QA/QC
- Capture current system engineering lifecycle activities (including planning, measures and monitoring) and technology for Second-Level Engineering
 - Clarify Safety Risk Management (SRM) requirements
 - Clarify Information Security Systems (ISS) requirements
- Simplify the Gold Standard by automating and linking with relevant tools

- **The Reengineering Process**

- A survey was sent out across ATO (Technical Operations, Terminal, En Route, and System Operations) asking questions about the TEGS
- Responses are back and the analysis phase is underway
- Report on findings with recommendations presented to Senior Management