

Strategic Enterprise Testing and Evaluation Approach

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Purpose

- **Demonstrated in this presentation is a concept for a Strategic Enterprise Test and Evaluation (SET&E) process that integrates all test organizations into a single process.**
- **Our intent is to show the relationship between a well-defined SET&E process and a reduction in Total Ownership Cost (TOC).**

SET&E:

Knowledge sharing and best practices in all T&E aspects; systematically and purposefully aligning users and T&E centers' integration efforts to deliver effective T&E capacity and capabilities by optimizing test resources through leveraging performance results across program with common architectures and/or systems.

TOC:

The sum of all financial resources necessary to organize, equip, train, sustain, and operate military forces sufficient to meet national goals in compliance with all laws; all policies applicable to the Department of Defense (DoD); all standards in effect for readiness, safety, and quality of life; and all other official measures of performance for DoD and its components.

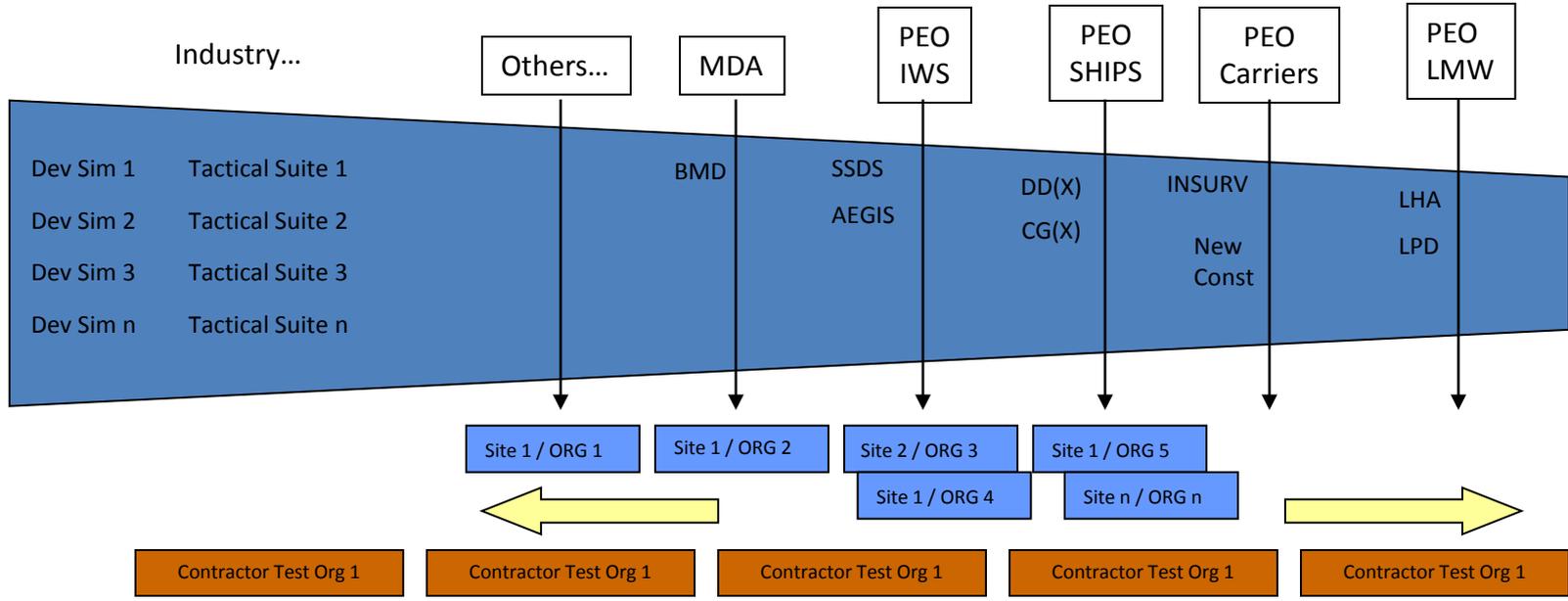
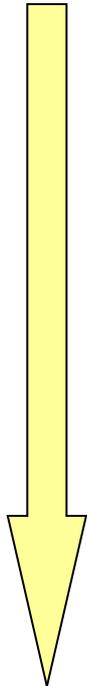
Reduce the cost of delivering warfighter capability

- **Overlapping T&E Infrastructure**
 - Redundant test capabilities and test facilities
- **Limited Coordinated Efforts**
 - Collect or provide T&E requirements
 - Perform planning, scheduling, and execution
 - Conduct testing
 - Perform integration
 - Develop products
- **Funding Similar Efforts for Different Ship Classes**
 - Duplicating key component of systems

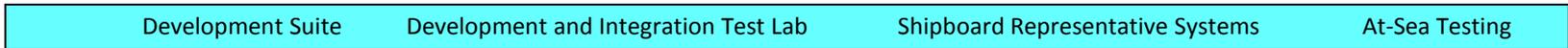
Redundant facilities and infrastructure are significant budget drivers

Duplicate Processes Example

Current State



Ideal State



MDA: Missile Defense Agency
 PEO: Program Executive Office
 IWS: Integrated Warfare Systems
 LMW: Littoral Mine and Warfare

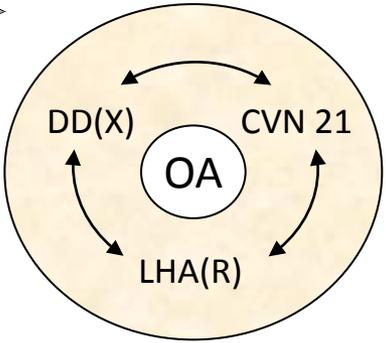
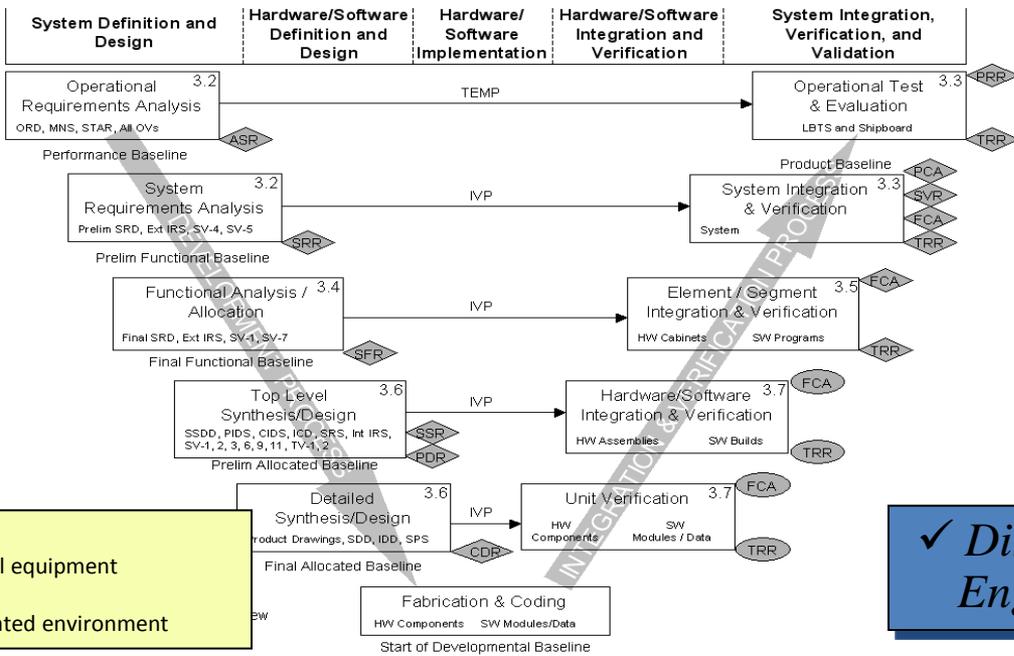
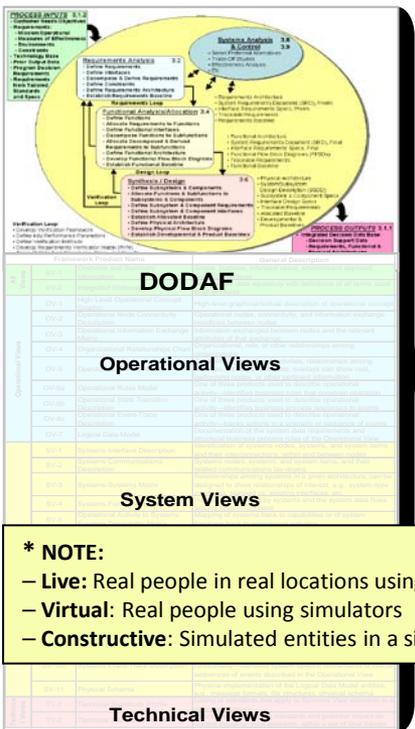
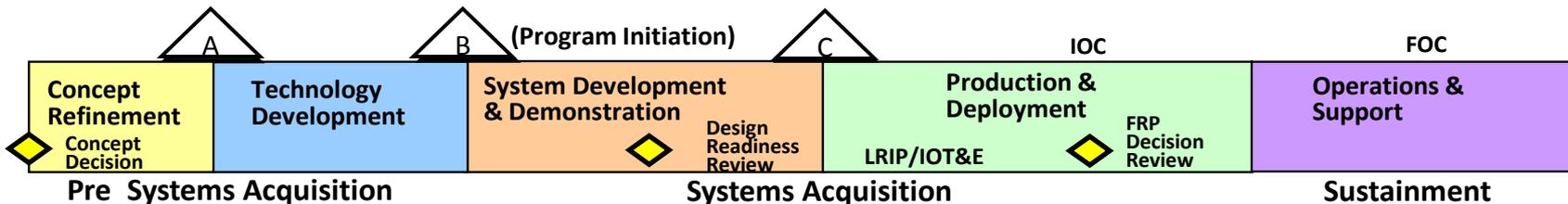
BMD: Ballistic Missile Defense
 SSDS: Ship Self-Defense System
 INSURV: Inspection and Survey

- **Reduce TOC by Better Coordinating Facilities and Infrastructures**
- **SET&E Introduces a Process for Coordinating Facilities and Infrastructures**
 - **Integrated test team**
 - Understand task, schedule, requirements
 - Move toward common processes and automation
 - Blend at-sea and land-Based test teams
 - **Consolidated test facilities and test approach**
 - One development site
 - One integration site
 - One configuration management site
 - Consistent tools

The teams should design, develop, and test with active customer participation.

Leverage Systems Engineering Process Changes To Affect Test Process and Approach

**Test like you fight through application of live, virtual and constructive test and training environments*
 Test & Evaluation Policy Revisions Memo dated 22 Dec 07



*** NOTE:**

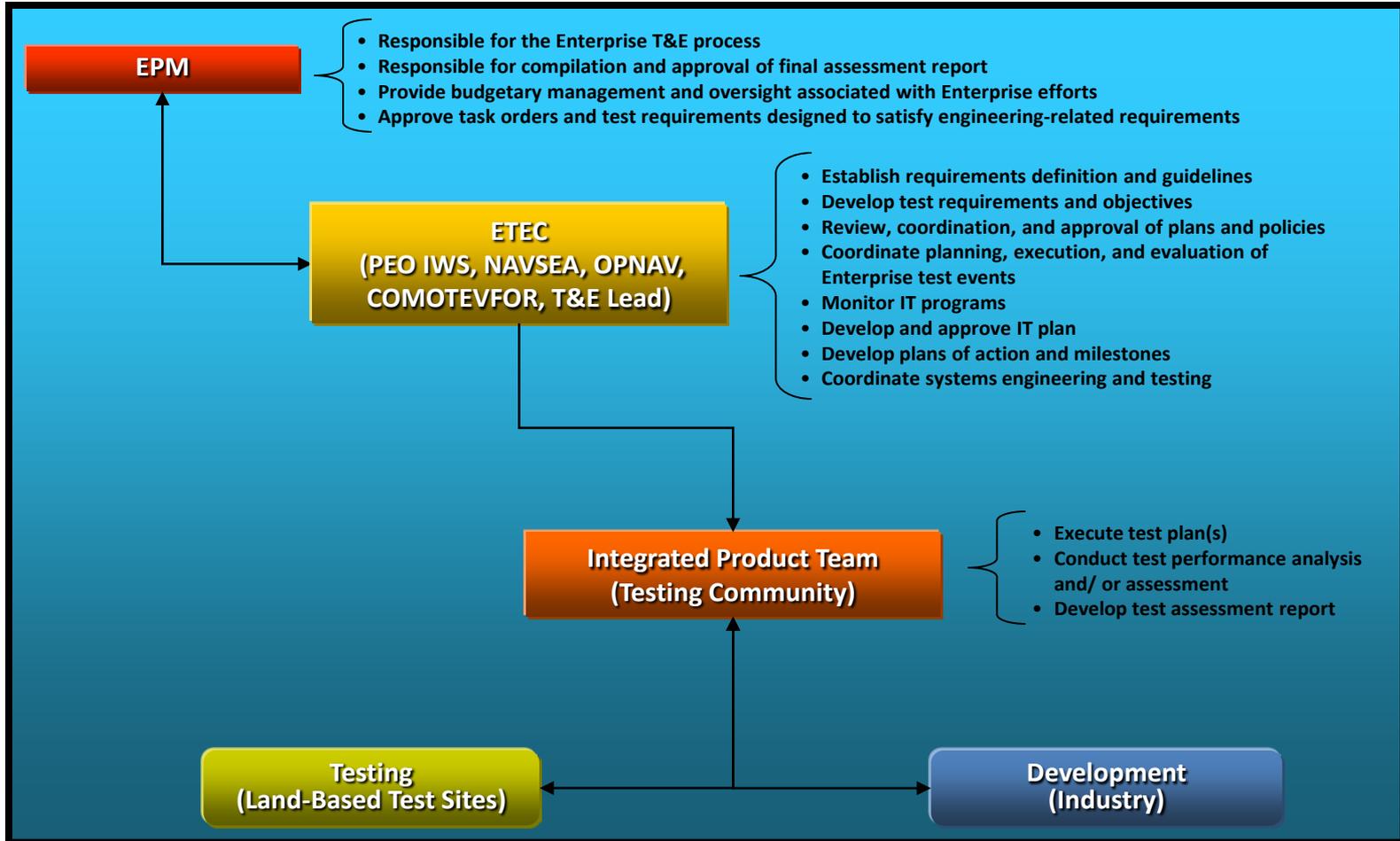
- **Live:** Real people in real locations using real equipment
- **Virtual:** Real people using simulators
- **Constructive:** Simulated entities in a simulated environment

✓ Disciplined Systems Engineering Process

Excerpted and modified from Proceedings of the First Annual NCOSE Conference, Forsberg and Mooz, 1990; and Visualizing Project Management, Forsberg, Mooz, Cotterman, ©2000 by John Wiley & Sons, Inc.

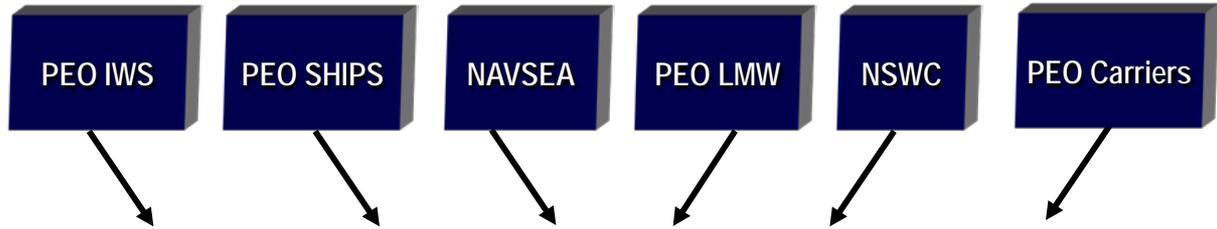
We must change from an approach that is optimized by program and platform to one that can solve the challenges of integrated systems that cross many platforms and functions
 ASN(RDA) Reorganization Message dated November 11, 2002

Proposed SET&E Process

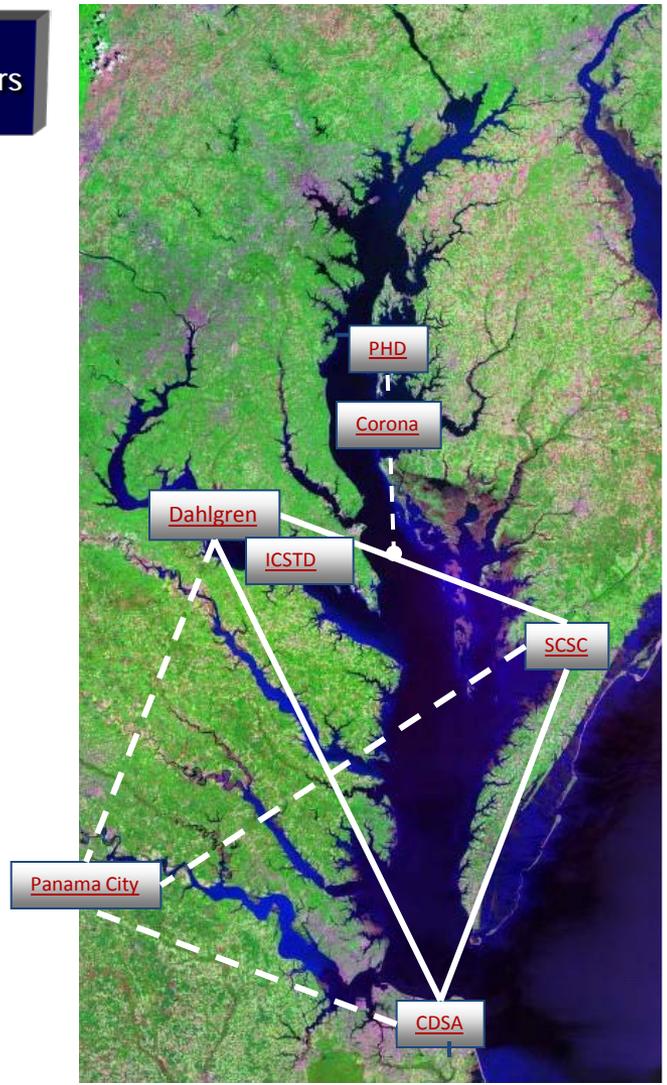
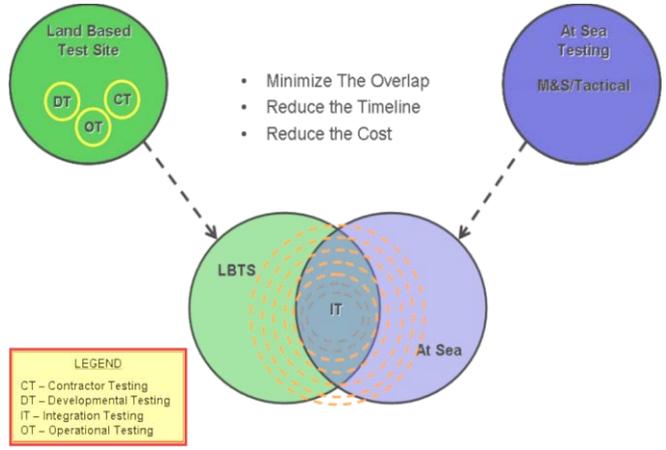


Effective test engineering across the surface Navy enterprise

SET&E Participants

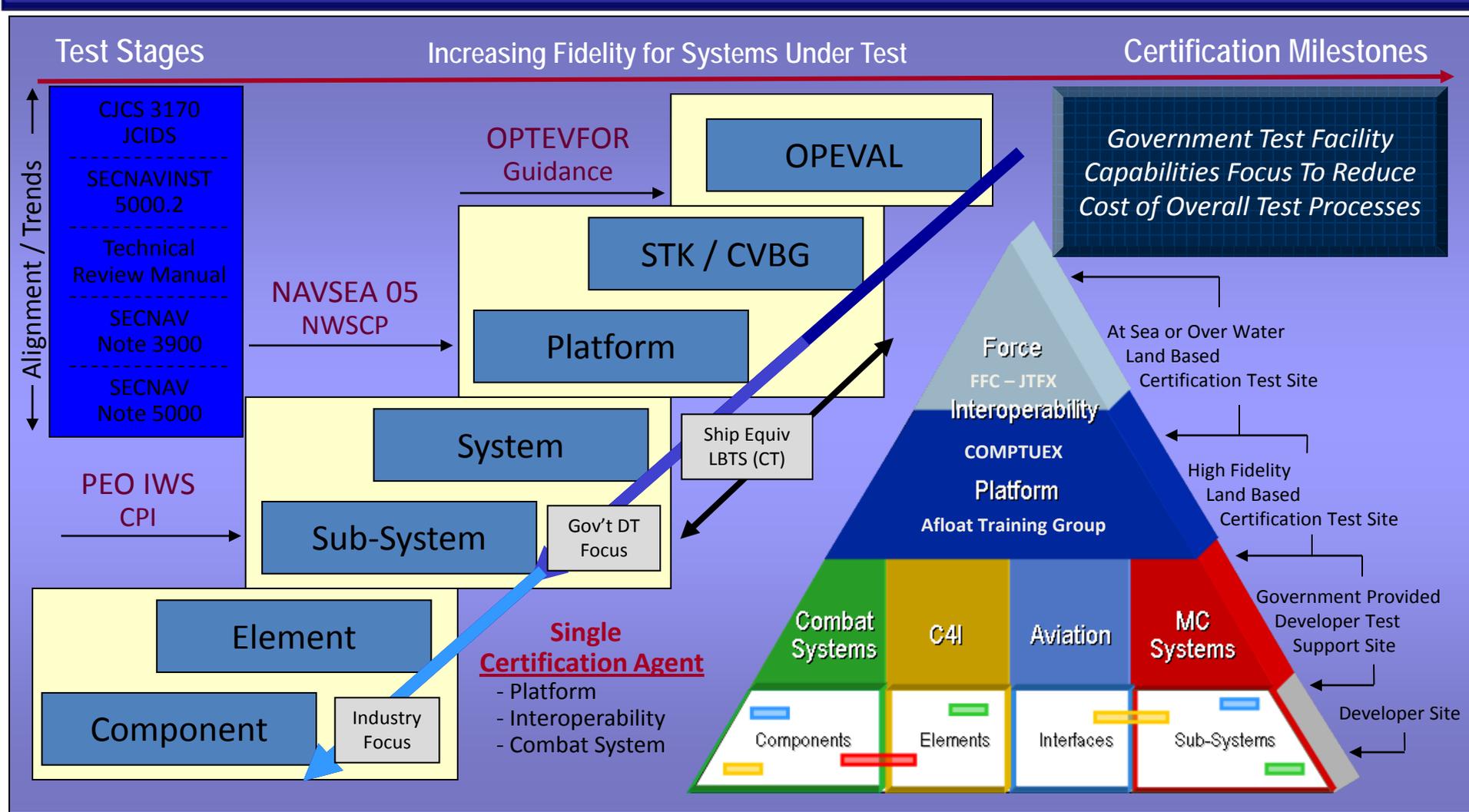


- Single Team for Warfare/Combat System
 - Providing Integration Support and Evaluation of Key Warfare System Elements
 - Land Based Testing and Certification
 - Facilitate *unified* overall land-based test efforts
 - Develop and execute configuration management plan
 - Partner with SCSC, CDSA, Corona, ICSTD
 - Supported by at-sea test team (PHD)
 - Surge to meet land-based test needs
 - Corona detachment at SCSC provides added analysis support
 - At-Sea Testing
 - Facilitate across the at-sea test efforts
 - Supported by land-based test team
 - Surge to meet at-sea needs



- **Enterprise T&E Instruction, in Compliance with Department of the Navy guidelines**
 - Enterprise T&E goals and objectives
 - T&E guiding principles
 - DoD T&E process
- **Enterprise T&E Plan of Action and Milestones**
- **Modeling and Simulation Master Plan**
- **Test Assessment Report**
- **Test Objectives**
- **Integrated Test Plan Document**

Future State - A Fully Integrated Test Approach



Overarching Test Process Alignment To Cost Optimize Test Capabilities and Processes

Questions?