



Early Involvement and Test Integration

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Overview

- **Test & Evaluation (T&E) challenges**
- **Air Force T&E vision**
- **AFSPC impact**
- **Considerations**
- **Space Test Integration Office (STIO)**
- **Initiatives**



T&E Challenges & Impacts

- **Historical challenges**
 - **Consistency/adequacy of developmental testing (DT)**
 - **Lack of clear requirements and limited DT/OT interaction**
 - **Duration of OT – Duplication between DT and OT**
 - **Limited expertise**
- **Impacts**
 - **Significant gaps between DT and OT objectives**
 - **Poor linkage between DT results and OT performance**
 - **Delayed identification of system deficiencies**
 - **OT “show-stoppers” and subsequent fielding delays**
 - **... and others**

These are AF-wide problems



T&E Vision

- **Early Involvement: OT and DT participation from concept development through sustainment**
- **T&E integration**
 - **Structure T&E to more effectively support the requirements and acquisition process**
 - **Minimize “seams” between contractor testing, DT and OT**
- **Implementation built around Integrated Test Teams (ITT) and integrated test designs**

AFI 99-103 provides the framework



Impact

Early Involvement and Test Integration

	Pre-ITT (Concept Development)	“Early” ITT (Strategic Planning)	“Late” ITT (Tactical Execution)
Tasks	<ul style="list-style-type: none"> • Analysis of Alternatives • High Performance Teams • Requirements Testability • Early Strategy Support 	<ul style="list-style-type: none"> • Test Strategy & Methods • Integrated Test Design • T&E Resource Planning • CT / DT / EOA / OA 	<ul style="list-style-type: none"> • Test Event Planning • Test Execution • Deficiency ID • IST / OUE / FDE / ICE
Products	<ul style="list-style-type: none"> • RFP / SOO • ICD • Acq. Strategy / APB 	<ul style="list-style-type: none"> • TES / TEMP • Integrated Test Concept • OA Plans / Reports 	<ul style="list-style-type: none"> • Detailed Test Plans • Test Procedures / DMAP • Test Reports / DAR
Skills	<ul style="list-style-type: none"> • Acquisition Process • Requirements (JCIDS) • Contracts • Test Concept Dev. 	<ul style="list-style-type: none"> • Program Management • Acquisition Process • Test Management • Test Design 	<ul style="list-style-type: none"> • Test Management • Data Analysis • Operations Experience
← Post AFI 99-103 AFSPC OT Scope →			

Increased Scope, Sustained Involvement, Broadened Skill-set



Considerations

- **Early involvement and integration**
 - Significant expansion of historical AFSPC OT role
 - Increased emphasis on government DT role
 - Requires skilled manpower, funding and on-going support
- **Implementation**
 - **Who:** Roles based on organizational level and unit capability
 - HQ/Center/Group/Squadron-level roles
 - Skills/Manpower/Authority
 - **How:** Organize to facilitate “structured DT/OT interfaces”
 - Organizational (e.g., STIO, 17 TS Re-org, SMC/EAV, SMC/SDTW)
 - Relational (e.g., Working Groups, Integrated Test Teams)
 - **Where:** Strategic placement of limited personnel
 - AFSPC/CC – “need qualified OT&E folks in our SPOs so that they can be a part of the Developmental Testing”
 - Establish presence at AFSPC-supporting product centers (SMC, ESC)

Doing it is required...choices are “who,” “how” and “where”



STIO - Overview

- **Mission:** *Enhance warfighting capability through the effective integration of OT and DT within the acquisition life-cycle of space and missile forces*
- **Objectives:**
 - **Serve as the AFSPC integration point for T&E (DT & OT)**
 - **Effectively manage SIDC early involvement & ITT support**
 - **Provide structured SIDC-SMC-ESC T&E interfaces (DT/OT)**
 - **Provide structured SIDC-AFOTEC T&E liaison (OT/OT)**
 - **Provide forum for “external” T&E enterprise collaboration (AFOTEC, AFMC CTAs/TESTREPs, A3TO, A5XI...)**
 - **Facilitate space test cadre development**
- **Leadership:** Director (595 SG/TE), Dep Director (SMC/EAV)
- **Locations:** Schriever AFB, LA AFB, Hanscom AFB



Initiatives - Activity Overview

- **T&E policy and process development**
 - AFSO 21 and D&SWS T&E initiatives
 - AFSPC T&E policy
 - SMC T&E policy
- **Organizational structure**
 - Codify roles and terminology
 - Identify stakeholders and develop relationships
 - Facilitate policy implementation and process improvement
- **Program support**
 - AFSPC “Test Call”
 - ITT implementation and support
 - T&E infrastructure and resource options



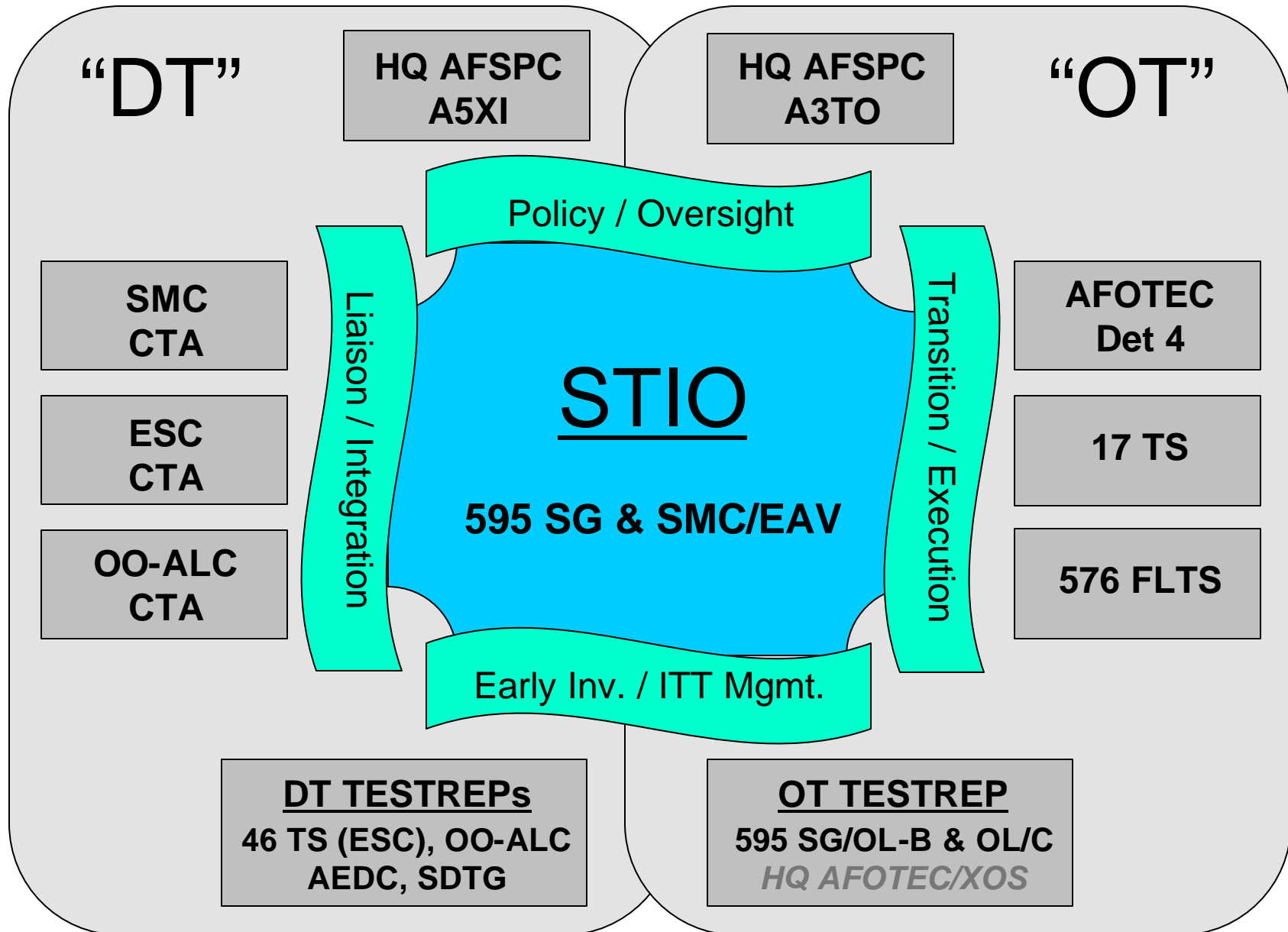
Initiatives - T&E Terminology

- **Integrated Test Team (ITT):**
 - Cross-functional team of empowered representatives from multiple disciplines and organizations
 - Co-chaired by operational testers and the program manager
 - Responsible for developing & guiding implementation of T&E strategies
- **Center Test Authority (CTA) (Manpower: 5-6 people)**
 - Maintains oversight of the center's T&E processes,
 - Assists PMs & ITTs in developing their test programs
 - Center advocate for T&E policy, training and resources
- **Test Representative (TESTREP) (Manpower: effort driven)**
 - Provide liaison between a test center/wing and their primary ALC or product center customer(s)
 - Usually work within supported CTA
 - Facilitate networking between testers and PMs at each center
 - Bring test center resources to bear to assist PMs in executing programs

Product Centers have CTAs, Test Centers provide TESTREPs

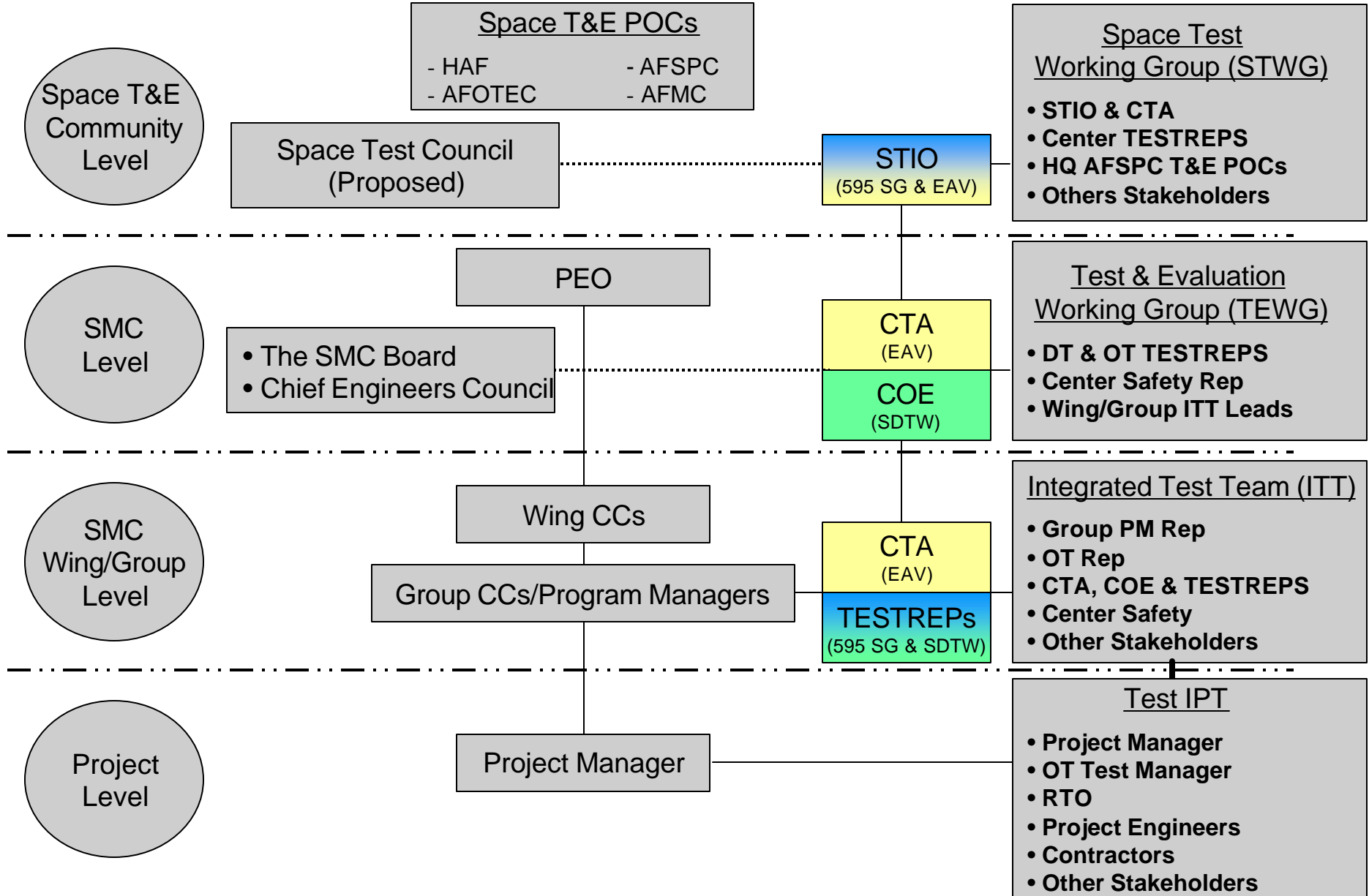


Initiatives - Space T&E Relationships





Initiatives - Space T&E Structure





Initiatives - ITT Implementation

Existing / In-work ITTs

ITT Name	Programs Covered
AEHF ITT	AEHF
AFSCN ITT (AITT)	AFSCN Upgrades (e.g., RBC, ESD)
CCIC2S ITT	CCIC2S Programs
GPS ITT	IIR, IIM, IIF, III, OCX
MILSATCOM CCS-C ITT	CCS-C for WGS and AEHF
ODSI ITT	ODSI
RAIDRS ITT	RAIDRS
Range ITT (RITT)	LTRS
SBIRS ITT	SBIRS
SBSS ITT	SBSS
SIDC Innovation Program ITT	AF TENCAP and SIDC/XI
Space C2 ITT	(Proposed)
SR ITT	SR
TSAT ITT	TSAT
WGS ITT	WGS
Rapid Reaction ITT	SYRS Programs