

DoD CBRN Defense (CBRND)

Test & Evaluation Standards Development



JPEO-CBD Advanced Planning Briefings for Industry (APBI)

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PURPOSE

To provide information to the Defense Industry on the establishment of DoD CBRND T&E standards and their role in the process.

TOPICS

CBRND T&E Executive Oversight Role

Why Have CBRND T&E Standards?

DoD CBRND T&E Standards Development Process



CBRND T&E Executive - Oversight Role



Ensure adequate T&E for CBRN defense systems

- **Establish T&E Standards**
- **Coordinate community planning and investment in T&E infrastructure**
- **Provide T&E guidance for acquisition programs**
 - Approve test documentation
 - Resolve T&E Issues
- **Ensure early T&E involvement in acquisition programs**
 - Facilitate test matrix that meets program budget/schedule
 - Reduce costly redundant testing
- **Provide T&E Policy for the Enterprise**



Why Have T&E Standards?



“It is essential for the Nation to have reliable CBRNE equipment that can be used with confidence for the protection of life, health, property, and commerce. The United States Government will, together with commercial and end-user communities, facilitate the development and implementation of national consensus standards, and develop an enduring capability to coordinate, prioritize, and implement CBRNE standards.”

*“A National Strategy for CBRNE Standards”
National S&T Council, Subcommittee on Standards
Signed by President’s Science Advisor 17 May 11*



Understanding Test Data



Dilbert.com DilbertCartoonist@gmail.com



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DoD CBRND T&E Standards Background



- Army T&E Executive “dual-hatted” as the CBRND T&E Executive
- Joint community Test and Evaluation Capabilities and Methodologies Integrated Process Team (TECMIPT) established March 2005 to:
 - Provide CBDP technical Subject Matter Expertise (SME) for the CBRND T&E Executive
 - Identify T&E capability/infrastructure gaps in support of the POM and T&E strategies
- TECMIPT role expanded in July 2009 to include development of CBRND T&E Standards for CBRND T&E Executive approval
 - CBDP T&E Standards Development Plan - signed out in July 2010 with GO/SES concurrence from four service OTAs, JPEO-CBD, JSTO, JRO
 - TECMIPT now **interagency**, with DHS, NIST, EPA, DOE actively involved
 - TECMIPT T&E standards development coordinated with international partners

CBRND T&E Executive establishes T&E Standards through the TECMIPT



T&E Standards

National and International Priority



DUSA-TE currently coordinating CBRND community T&E standards with federal agency and international partners :

- DOD/DHS/EPA Technical Coordination Working Group (TCWG)
- White House National S&T Council (NSTC) Subcommittee on Standards (SoS) Roadmap Working Group (WG)
 - A National Strategy for CBRNE Standards (includes T&E Standards) was signed out by the President's Science Advisor 17 May 2011
- ASCAUKUS CBR MOU Test, Evaluation and Simulation Working Group (TESWG) and other fora

Ultimate goal: Reliable data shared by all

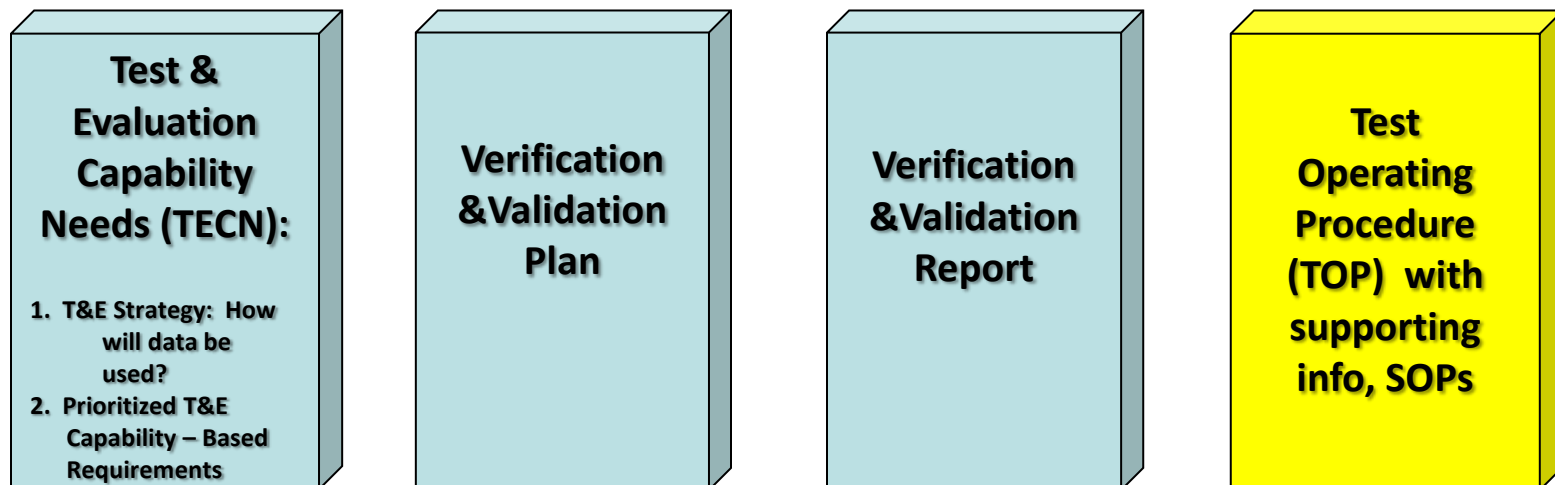


DoD T&E Standards Definition



Validated test infrastructure/methodologies that produce reliable, reproducible data to meet T&E community needs and inform decision makers

T&E Standards Documents



Documentation w/details are critical to common understanding of test data



Interagency T&E Standards Benefits



- **Enable quality, affordable defense systems for the Warfighter and First Responder. Standards provide:**
 - Common T&E definitions, language
 - Common, quality test data that can be shared/understood by all
 - Reduced test redundancy
 - Validated T&E infrastructure that meets interagency data requirements
- **Especially critical for T&E of Commercial Off the Shelf (COTS) equipment used by military and first responders**

Interagency signature means:

- T&E Standard is technically sound
- Documentation is adequate in terms of detail, quality and clarity
- Agency will support use of test method and sharing of data



Community buy-in is critical for implementation of T&E Standards

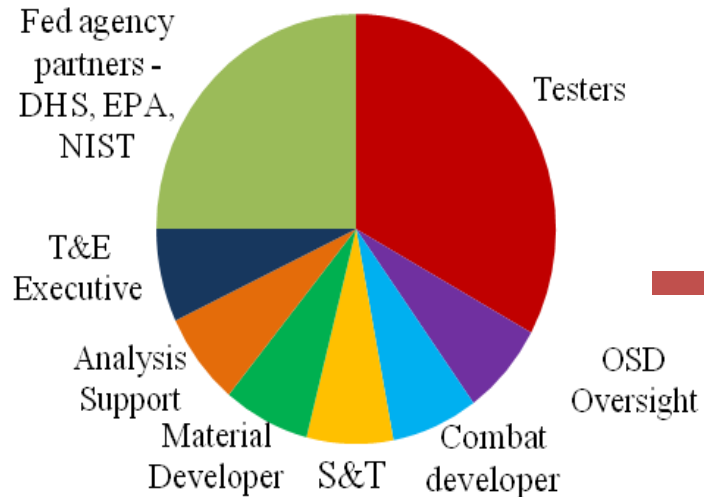


DoD Process for Establishing T&E Standards

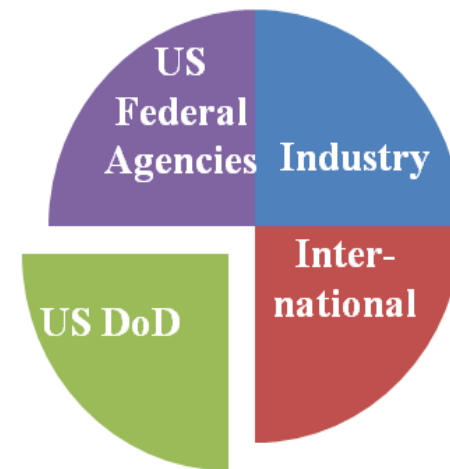


TECMIPT cross-community subject matter experts provide rigor to T&E standards development

TECMIPT Members



Worldwide CBRND T&E Standards Partners





TECMIPT Responsibilities



Nine TECMIPT sub-groups, i.e. Capability Area Process Action Teams (CAPATs)

- Identify and prioritize CBRND T&E capability gaps for POM input
- Develop and prioritize requirements for T&E capabilities
- Provide technical **community-wide development/review** of T&E standards documents, **O6/GS-15 level concurrence** to CBRND T&E Executive for approval

Chemical
Detection

Biological
Detection

Decontamination

Individual
Protection

Modeling &
Simulation
(M&S)

Collective
Protection

Radiological/
Nuclear
Defense

Non-
Traditional
Agent (NTA)

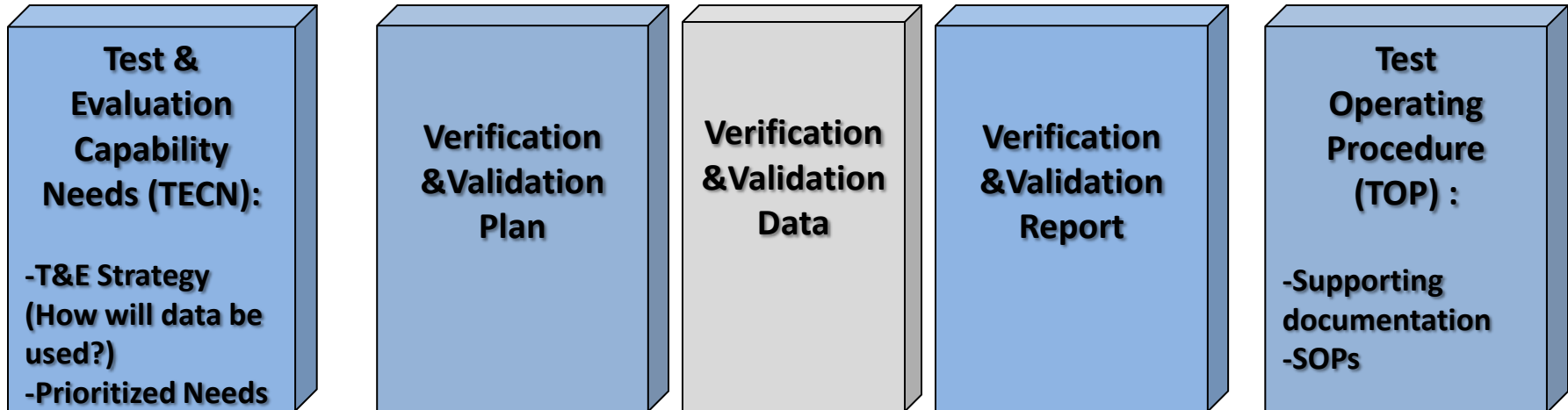
Bio Surveillance
(currently being formed)

CAPATs

CAPAT SMEs provide technical rigor to T&E Standards



T&E Standards - Developed/Reviewed by CAPATs



Develop/concur upon requirements documents for T&E infrastructure

Review V&V data, provide input/concurrence for T&E infrastructure verification and validation

Develop/review/concur upon T&E methodologies

CAPAT SMEs critical to success



Current TECMIPT Interagency T&E Collaboration Examples



DHS, NIST, EPA now collaborate to establish/implement CBRN T&E standards

- **Rad/Nuc CAPAT**

- Chaired by NIST, 22 other federal agencies participating under:
 - National Institute of Standards and Technology (NIST) (Chair)
 - Department of Defense (DoD)
 - Department of Homeland Security (DHS)
 - Environmental Protection Agency (EPA)
 - Department of Energy (DOE)
- Developing an interagency Commercial Off The Shelf (COTS) test program
 - Includes ISO certification/accreditation of test labs
- Reviewing/concurring on detection and decontamination T&E methodologies

INTERAGENCY COLLABORATION SUCCESS STORY

Quickly provided interagency Rad T&E Subject Matter Experts (SMEs) to help JPM-P answer urgent question from field in Japan following nuclear reactor incident: “Does CBD decon and personal protection equipment work against the Japan Rad threat?”



Current TECMIPT Interagency T&E Collaboration Examples

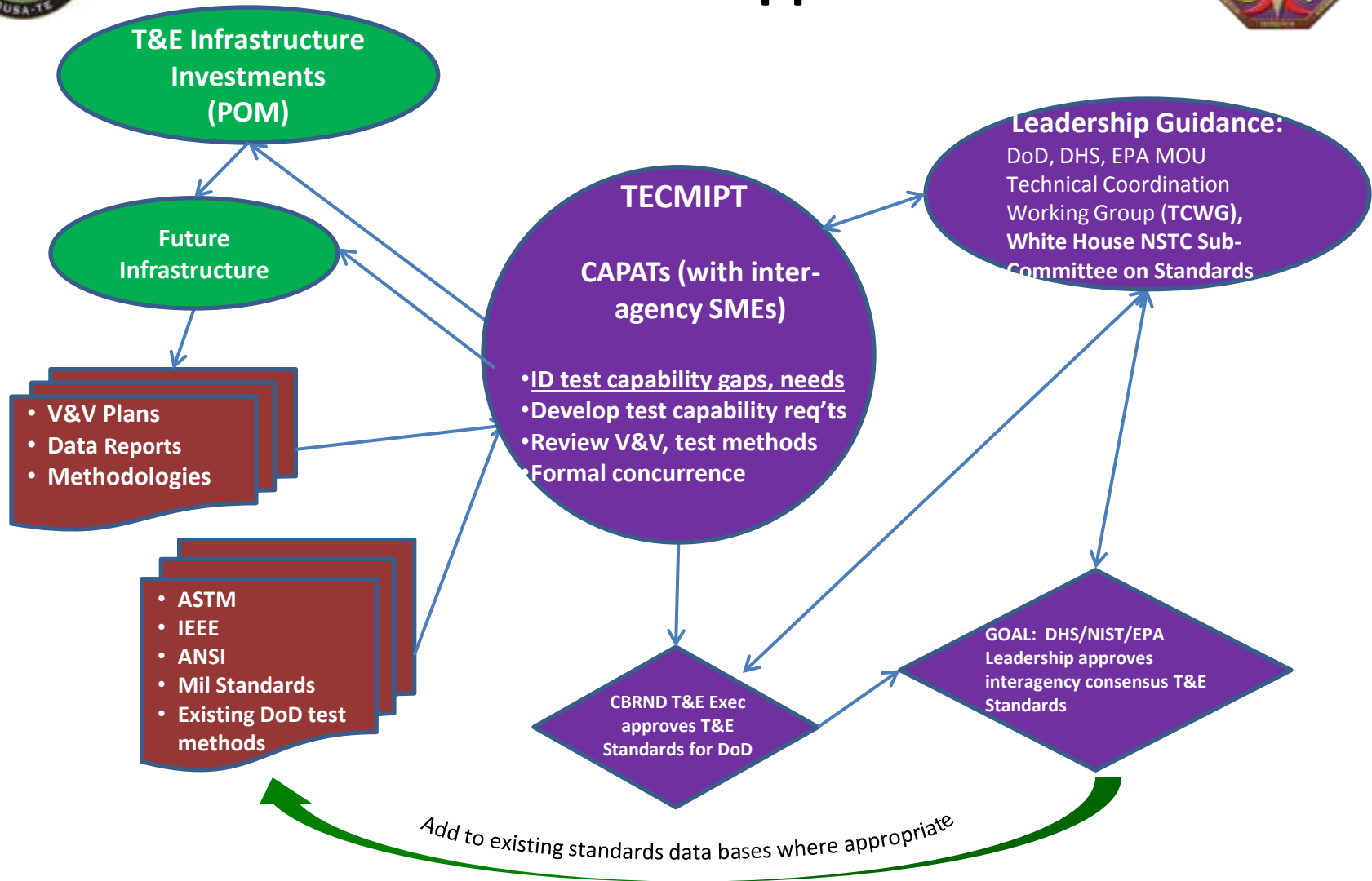


- JSTO, JHU/APL, DUSA-TE working toward T&E Standards and testbed for TRL 4 and above bio surveillance systems
- Initial planning meeting held 26 Aug 11
- Bio Surveillance Capability Area Process Action Team (CAPAT) WG to be established with interagency, academia, DoD members
- Chemical Detection and NTA CAPATs to also accept academia input

Bio Surveillance testing to be “born” interagency



Proposed Interagency T&E Standards Approach





Summary



- **T&E Standards facilitate quality CBRND systems for Warfighters, First Responders and all users**
- **Many different T&E “consensus standards” currently exist, but are not complete for CBRND performance testing**
- **DoD is united with other agencies for common CBRND T&E Standards through TECMIPT**
 - Critical for President’s National Strategy
 - Provides consensus across more stakeholders
- **CAPAT participation and the TECMIPT Standards processes to be extended to Industry partners for their valuable input**

T&E Standards are critical for vendor data and product acceptance

Explosion of Interest in TECMIPT CBRND T&E Standards Process

