

ATC DE/DT 2023 Spring Meeting Project Status



- **DE/DT Project Mission**
- **DE/DT Project Goals**
- **Committee Assignments**
- **Next Steps**

Systems Engineering Division - Automatic Test Committee (ATC) Project from Spring Meeting of 2022



Reminder of the premise for the 2023 Project – Drivers

- **Digital Engineering (DE) / Digital Transformation (DT)**

What does DoD want to accomplish with DE/DT?

What are DE and DT as they relate to automatic test systems?

- **Industry status, capabilities and limitations**

1. What is the current ability of the industry to deliver digital models (and/or for simulation) of its items and against or in support of which standards?
2. What is the current ability of the industry to collaborate in a digital environment?
3. Would industry be able to respond to solicitations requiring digital acquisition?
4. How does industry think the USG can best make use of Digital Engineering in future acquisitions?

Project DE/DT/DA definitions

- **Digital Engineering:**
 - Using Under Secretary of Defense for Research and Engineering (https://ac.cto.mil/digital_engineering)
 - Digital engineering is an integrated digital approach using authoritative sources of system data and models as a continuum throughout the development and life of a system. Digital engineering updates traditional systems engineering practices to take advantage of computational technology, modeling, analytics, and data sciences.
- **Digital Transformation** (varied inputs, all themes from DoD strategy for a fully digital environment and acquisition process)
 - Digital transformation is the adoption of digital technology by an organization to digitize non-digital products, services or operations.
- **Digital Acquisition** (in alignment with adoption of Digital Transformation and providing digitized products)
 - Process of using digitally described products, that includes detailed digital models of the products, for procurement, sustainment and management of the product life cycle.

Project Mission and Problem Statement



– Given the following is the Need Statement:

- *What is the current state of industry to support an ATS Digital Product Model and Acquisition? And, what are the insights Industry may provide to support our DoD ATS partners with their Digital Engineering and Acquisition needs?*
 - Indicate the state of Model Based System Engineering tools and processes within the Automated Test Industry and the Standards used by this industry, along with expectations from government on DE/DT and the Digital Acquisition process.
 - This project is expected to help the government understand/gauge industry's response to a digital acquisition using SMBE, tools and the standards by which to convey the digital product.

– Mission:

- *Provide recommendations to the government on how the ATE industry can support Digital Engineering and Digital Transformation, specifically the process, approaches, models, tools, and standards by which the automated test equipment and test programs are developed, acquired, and maintained through Digital Acquisition.*

– Problem Statements:

- *The DoD and the ATE industry need faster and less expensive method to develop, deploy, and sustain automated test solutions.*
- *The DoD Digital Acquisition mandate is pressuring government acquisition organizations to emplace processes that deliver digitally acquired digital products.*
- *The industry lacks definition of the digital acquisition process as it relates to ATE and Digital Engineering / Transformation.*

NDIA Automatic Test Committee Project Goal

- **Deliver a document for DoD reference that provides insights into the ATS/ATE Defense Industry's capabilities and potential improvements to support Digital Acquisition and the necessary execution of Digital Engineering and Digital Transformation.**
- **Brief the document to NDIA's System Engineering Division to describe and document the Automatic Test Committee findings**
 - Includes a path and government/industry tool(s) that support the mandated DoD digital acquisition
 - Intent: Explain Case Models / User stories that depict:
 - MBSE Models and Processes
 - Standards (ATML, MBSE)
 - Benefits of Digital Acquisition Strategy
 - Potential risk and shortcomings
 - What artifacts should be expected/included (life cycle, sustainment)
 - To what level digital footprints are shared amongst industry (storage & retention/ how to share it)

Committee List



- **Committees**

- a. Processes/Digital Tools** - recommended list of processes and tools to be used in ATS digital engineering/digital transformation.
- b. Standards** – recommended list of standards and model/data formats to be used in the ATS digital engineering/digital transformation processes.
- c. Data Storage/Cloud and Cybersecurity for Digital Transformation and Acquisition** – impacts expected with massive data increases and movements of data.
- d. Life-Cycle Support and Logistics** – support needs impacts from digital engineering/transformation and acquisition.
- e. Project management** – Manage project and create the final briefing/document.

Expectations and next steps

- **Committee team groupings choice or assignment completed (adjustments over next two weeks).**
- **Periodic meetings (monthly) with updates from committees and progress report on project.**
- **Committee Kickoff in two weeks (March 16) with initial activities and status.**
- **Project information and initial plan for organization of plan results/information distributed next meeting.**
- **Looking for additional engagement on committees by our government partners. We have several involved now, can always use additional collaboration, feedback and oversight guidance.**