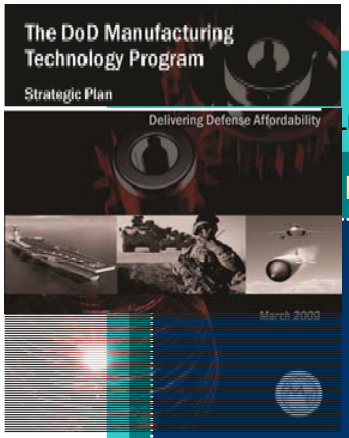
Establishing the Joint Defense Manufacturing Technology Panel's Advanced Manufacturing Enterprise (AME) Subpanel

John Christensen
Provisional AME Subpanel Chairman
703-786-1560
jchriste1@comcast.net

AME Subpanel Helps Address Major DoD ManTech Program Strategic Thrusts



Defense Industrial Base

LIABLE COST EFFECTIVE SUFFICIENT

Defense Manufacturing Enterprise

DoD ManTech Program

Strategic Thrust 1
Effective Management and Delivery of Processing & Fabrication Technology Solutions

Strategic Thrust 2
Active Support for
A Highly Connected and Collaborative Defense Manufacturing Enterprise

Strategic Thrust 3
Active Support for
A Strong Institutional Focus on Manufacturability and Manufacturing Process Maturity

Strategic Thrust 4
Active Support for
A Healthy, Sufficient, and Effective Defense Manufacturing Infrastructure and Workforce

JDMTP Subpanel Structure

Strong Traditional JDMTP Focus on Thrust 1

- Metals
- Composites
- Electronics
- AME

Improved Focus on Thrusts 2, 3, & 4

The AME Subpanel provides a strong organizational focus on Strategic Thrusts 2, 3, & 4, improving program "balance" across all four thrusts

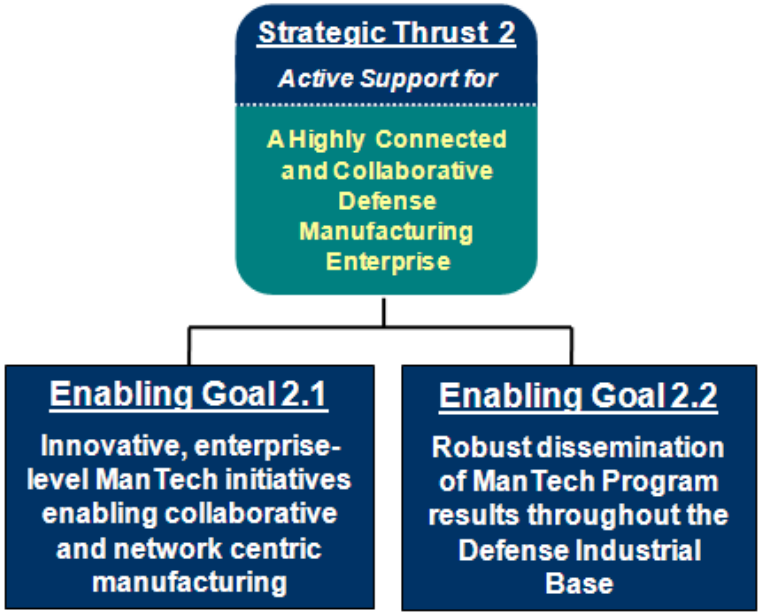
Draft Subpanel Scope

- Scope of AME activities as proposed by the JDMTP Principals:

Advanced Manufacturing Enterprise Subpanel: ***Encompasses the technologies, practices and procedures that foster collaborative and effective manufacturing enterprises including model based and network centric manufacturing environments, modeling and simulation capabilities, adaptive supply chains, and leveraged commercial practices. This scope also covers support for the development and maintenance of an industry-wide body of knowledge to enable the use of manufacturing readiness as a management criterion for achieving "design for manufacturability." Actions to assist in maintaining and improving defense manufacturing infrastructure and workforce are also within scope.***

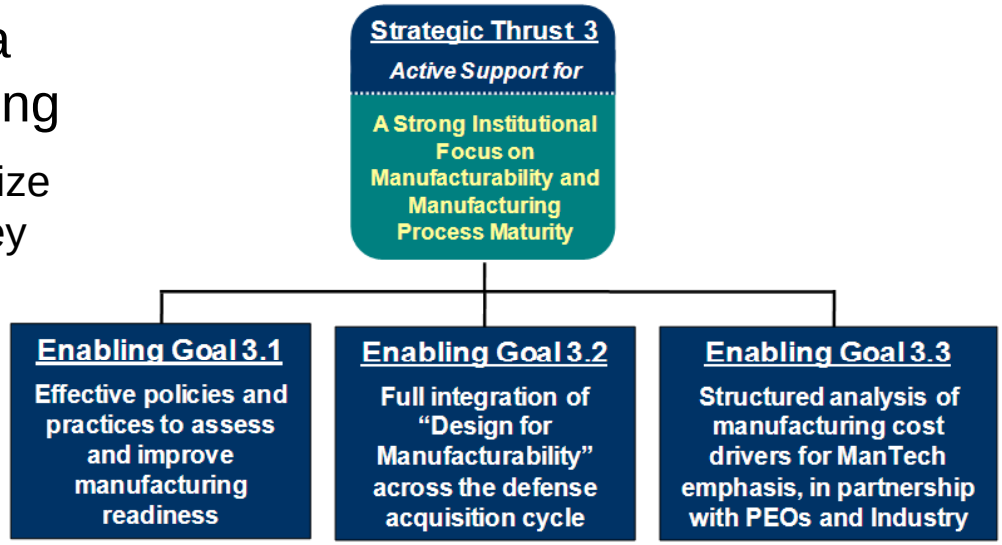
AME Initiatives Centrally Support Thrust 2 and its Enabling Goals

- Enabling Goal 2.1 Components
  - Highly Connected Manufacturing Environment
  - Development of Model-Based Enterprise (MBE) and 3-D Modeling Capabilities
  - Network Centric Data Environments, Adaptive Supply Chains
  - Enhanced Modeling & Simulation (M&S) Capabilities
  - Leveraged Commercial Practices for Defense Manufacturing
- Enabling Goal 2.2 Components
  - Dynamically Linked Communication Networks – Intense Collaboration
  - Aggressive Dissemination of ManTech R&D Results
  - Robust Pathways to Fully Enable Technology Transition

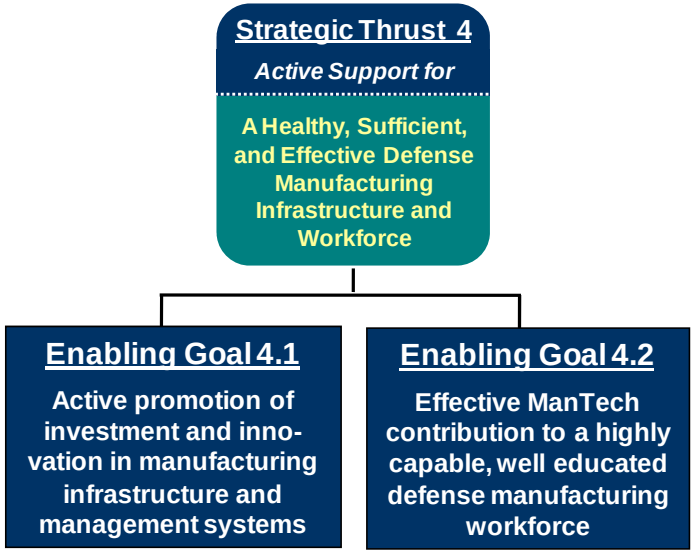


AME-Type Initiatives Comprise the Majority of Thrusts 3 and 4 Support

- AME Support for Thrust 3: Drives a System-wide Focus on Manufacturing
  - Goal 3.1: AME initiatives help institutionalize manufacturing readiness and MRLs as key management criteria
  - Goal 3.2: Model-based design and engineering activities support DfM and DfP objectives
  - Goal 3.3: AME cost modeling methods directly support structured analyses of manufacturing cost drivers



- AME Support for Thrust 4:
  - Innovative and intelligent Mfg practices and management systems enhance Goal 4.1 achievement
  - Enterprise-wide academic/workforce initiatives contribute to a world-class defense manufacturing workforce



Examples of Ongoing ManTech Work Supporting AME-Type Efforts

OSD ManTech (incl. DMS&T)

- 3D Technical Data Package
- 3D TDP Validation
- Integrated Design Environment For Visualization
- Simulation Using Flow Equivalent Servers
- Risk Analysis for Next Gen Supply Chain (RANGER)
- Cost Modeling for Enterprise Transformation (COMET)
- Smart Machine Platform Initiative (SMPI) Study
- 3D Official Pilot (ISBD)
- MRL Policy Coordination with OSD SE
- STEM initiatives
- DMC 2010 Prep Co-Lead

Air Force ManTech

- Leading Edge Supply Chain Study
- Precision Guided Robotics
- AME - Energy-Efficient Factory

Navy (VCS)

- Mid-Tier Shipyard Advanced Planning and Facility Analysis Toolset
- Integrated Planning Process
- VCS Supply Chain Technology Review
- Open Architecture - Impacting Ship Acquisition Affordability
- Supply Chain Management

MDA Producibility & Manuf.

- Intelligent and Integrated Manufacturing Systems - $140K
- Partnership between NASA and DoD - $270K (Radical Innovation &M&S Applications)
- Technical Data Package Development - $200K
- Smart Machine Platform Initiative Benchmarking and Planning -$113K
- Benchmarking of multiple sector platforms - $133K
- RFID Benchmarking - $131K
- Supply Chain Initiatives
- Modeling (SBIRs)
- DMC 2010 Prep Co-Lead

Army ManTech

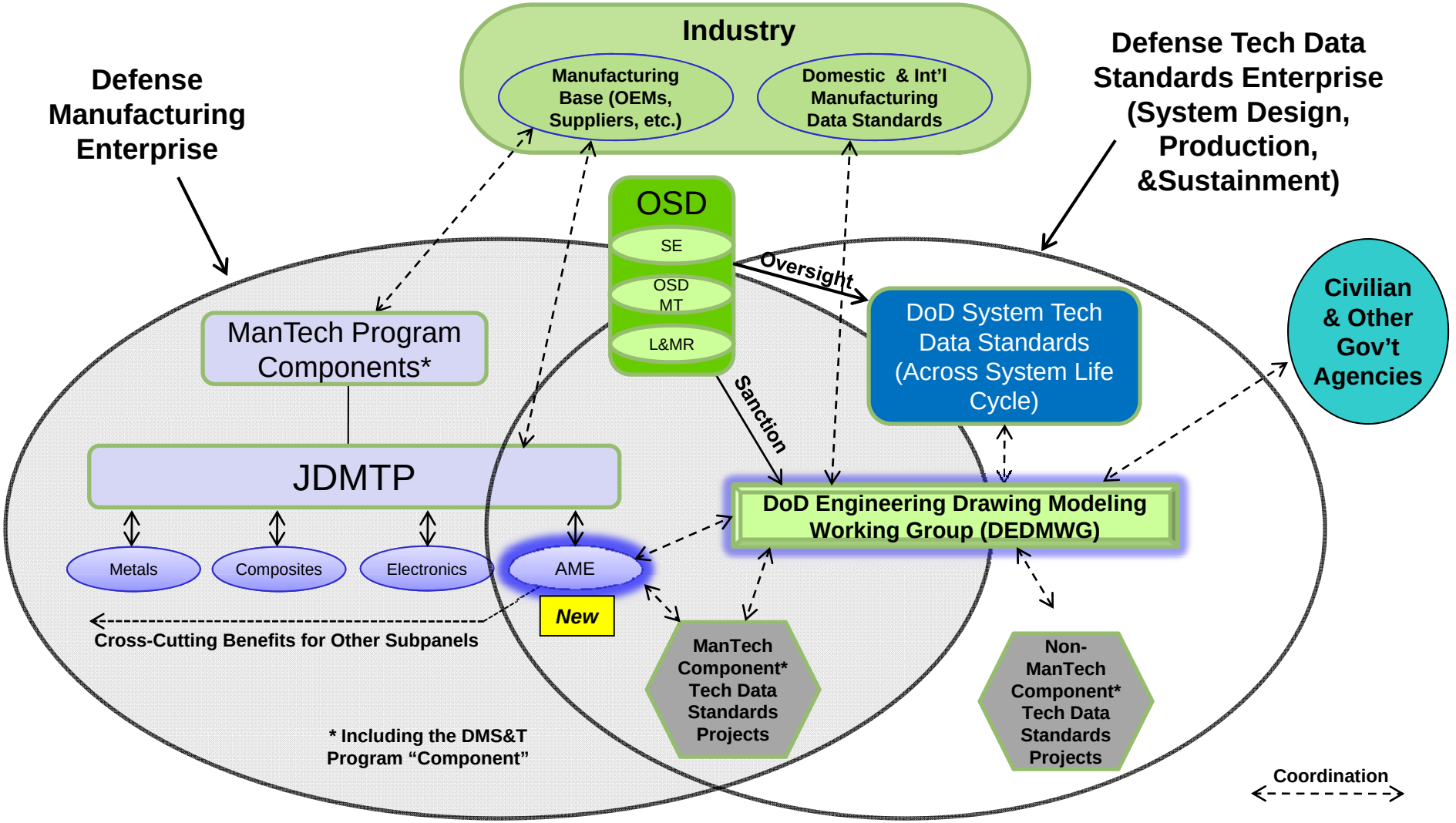
- Model –Centric collaboration environment
- Digital Depot Manufacturing
- Smart Machine Platform Initiatives
- Network Centric Prototype Manufacturing

DLA ManTech, Log R&D, IBIF

- Tech Data (TD) vision/roadmap
- Providing suppliers with 3-D models for competitive parts (lead-time and cost reductions).
- Automate 'reading' of text on 2-D drawings; and convert 2-D to 3-D solid models

Many current and planned component activities would naturally populate an AME-type portfolio

Thrust 2 & 3 Bi-Directional Leverage Between AME Subpanel & DEDMWG



Provisional Activities

- Provisional Leadership Team & Duties:
  - Subpanel Chair: John Christensen; Deputy Chair: Scott Frost; Executive Secretary: Richard Ast
  - Team's Key Duties:
    - Oversee Subpanel's development of initial working portfolio of funded projects (includes review/refinement of subpanel scope)
    - Develop schedule of major activities for the remainder of the year
    - Facilitate development of Subpanel's chairperson recommendation to the JDMTP; turn over leadership to permanent team (Goal: end of summer)
- Activities to-date (April/May)
  - AME Subpanel draft scope approved, Subpanel officially activated
  - Primary/alternate Subpanel members identified by components
  - Initial subpanel teleconference held, JDMTP principals updated
- Target for Full Operational Capability: end of summer

Summary

The JDMTP Advanced Manufacturing Enterprise (AME) Subpanel:

- ✓ Addresses and manages a growing portfolio of ManTech activities and investments that don't cleanly fit within the existing, three-subpanel review structure
- ✓ Will more aggressively advance Strategic Thrusts 2, 3, and 4 of the DoD ManTech Program Strategic Plan
- ✓ Fosters a more integrated focus, across DoD, industry, and academia, on "above-the-factory- floor" manufacturing topics

Strategic Thrusts 2, 3, & 4 will have equivalent JDMTP organizational focus

Questions?