

DEPARTMENT OF DEFENSE MANUFACTURING TECHNOLOGY PROGRAM JOINT ADDITIVE MANUFACTURING WORKING GROUP

The JOINT ADDITIVE MANUFACTURING WORKING GROUP is a Department of Defense community focused on communication and coordination among the Military Services and Defense Agencies to maximize the application of additive manufacturing for the U.S. warfighter and sustainers



e WHO?

- 20 Department of Defense Principal Members
- 200+ Members from the Joint Services (Army, Navy, Air Force, and Marine Corps), Defense Logistics Agency, Defense Innovation Unit, Office of the Secretary of Defense Manufacturing Technology Program, and Joint Staff



- Develop approaches to accelerate additive manufacturing adoption across the Department of Defense
- Coordinate additive manufacturing technology development
- Engage with industry through the Department of Defense
 Manufacturing Innovation Institutes

PARTNERSHIPS

JAMWG engages with Department of Defense public-private partnerships to collect insights, share information, and advance state-of-the-art developments for additive manufacturing with the private sector. *Key partners include:*

- America Makes: The National Additive Manufacturing Innovation Institute
- Additive Manufacturing for Maintenance Operations
- > Additive Manufacturing Standards Collaborative



Explore our website for more information and updates

OBJECTIVES

- 1. Qualification & Certification: Accelerate qualification and certification of additive materials, machines, and parts
- 2. Data and Model Sharing: Secure a common digital thread across the Department of Defense and industry
- 3. Education and Workforce Development: Expand proficiency in additive manufacturing
- 4. Integration: Develop Department of Defense Additive Manufacturing policy and guidance
- 5. Alignment: Improve communications and collaborations



- Understand the current state-of-the-art advanced manufacturing technologies and apply those capabilities for operations in contested logistics military environments
- Update on test & evaluations, demonstrations, assessments
- Inform future planning and exercises for Joint Forces needs



WHEN? MAJOR EVENTS

- Office of the Secretary of Defense Additive Manufacturing Workshop and Wargame
- Challenges leveraging multiple Department of Defense
 Manufacturing Innovation Institutes
- Defense Manufacturing Conference Technical Sessions
- Post-Military Additive Manufacturing Summit Face-to-Face



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Department of Defense Manufacturing Technology Program Office of the Secretary of Defense | Under Secretary of Defense for Research and Engineering

For more information visit www.DoDManTech.mil

SUCCESS STORIES

Joint Additive Manufacturing Model Exchange

In 2018, America Makes working in tandem with the Defense Logistics Agency, released the firstever secure web-based system to collaboratively share 3D models across the Department of Defense in support of additive manufacturing.

The Joint Additive Manufacturing Model Exchange (JAMMEX) links to various service-specific JAMMEX repositories containing 3D models. It provides users with web-based capabilities to store, manage, and collaboratively share 3D additive manufacturing models, cold spray procedures, and associated metadata.

The JAMWG provides oversight regarding the development of this tool and has incorporated a requirement for adoption via DoD Instruction 5000.93 "Use of Additive Manufacturing in the DoD".

JAMMEX is accessible by Common Access Card authentication for all users, including the Warfighter in the field: <u>https://jammex.dla.mil/</u>













Workbench for Additive Manufacturing Materials

In collaboration with the JAMWG, the Air Force Life Cycle Management Center contracted the services of the National Institute for Aviation Research (NIAR) at Wichita State University to develop and maintain the Workbench for Additive Materials (WAM) database.

NIAR was chosen based on their experience in managing the Composite Materials Handbook-17 which provides information and guidance necessary to design and fabricate end-items from composite materials. WAM is OSD supported and is an initiative in support of JAMWG priority 1.2 - Materials Data Accessibility.

Leveraging the data management model and database structure agreed upon by the military services and the DoD, the intent of WAM is to share DoD-developed or DoD-licensed metal additive manufacturing properties data across services to the established user base: https://wam.niar.wichita.edu/