

DEPARTMENT OF WAR MANUFACTURING TECHNOLOGY PROGRAM JOINT ADDITIVE MANUFACTURING WORKING GROUP

A Department of War community focused on communication and coordination among the Military Services and Agencies to maximize the application of additive manufacturing for the U.S. warfighter and sustainers



Who?

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

What?

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

Why?

- Understand the current cutting edge advanced manufacturing technologies and apply those capabilities for military operations in contested logistics
- Updates from tests & evaluations, demonstrations, and assessments inform future planning and exercises for Joint Forces needs

When? Major Events

- OSW Additive Manufacturing Workshop
- Challenges leveraging multiple Department of War Manufacturing Innovation Institutes
- Defense Manufacturing Conference Technical Sessions
- Pacific Operational Science and Technology Conference
- Military Additive Manufacturing Summit
- Joint Force Experimentation

Objectives:

- Qualification & Certification: Accelerate qualification and certification of additive materials, machines, and parts
- Data and Model Sharing: Secure a common digital thread across the Department of War and industry
- Education and Workforce Development: Expand proficiency in additive manufacturing across the services and the industrial base
- Integration: Develop Department of War additive manufacturing policy and guidance
- Alignment: Ensure utility to the warfighter through specific engagement and transition of technologies

Partnerships:

The JAMWG engages with Department of War 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



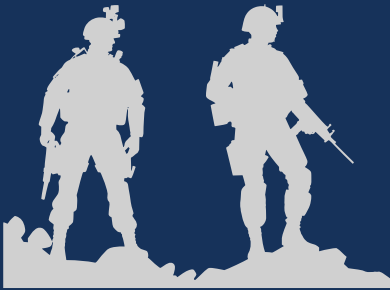
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DEPARTMENT OF WAR MANUFACTURING TECHNOLOGY PROGRAM

JOINT ADDITIVE MANUFACTURING WORKING GROUP SUCCESES

Joint Force Experimentation

Improving supply, maintenance, and repair timelines improves warfighter survivability and lethality.



The Joint Force Experimentation initiative demonstrates within a Joint Force exercise construct how additive manufacturing accelerates repair and recovery timelines by delivering emerging technologies directly to the warfighter.

To support this effort, the Joint Additive Manufacturing Working Group (JAMWG) evaluates these emerging additive manufacturing technologies and refinements to ensure they meet operational warfighter requirements, recommending suitable systems for transition to active service.

Joint Additive Qualification for Sustainment

The Joint Additive Qualification for Sustainment (JAQS) program expands the Department of War's (DoW) industrial base by addressing the shortage of mature additive manufacturing suppliers. The program develops, trains, and qualifies contract manufacturers to meet strict process control standards required for serial, mission-ready production.

Focused primarily on laser powder bed fusion and directed energy deposition, JAQS captures critical AM process knowledge in standardized qualification guidance.

Selected U.S. suppliers receive hands-on training to implement these process controls. Upon completing a verification audit, successful suppliers are added to the DoW's list of approved manufacturers, ensuring reliable and consistent part production across the enterprise.



Allied Additive Manufacturing Interoperability

The JAMWG's Allied Additive Manufacturing Interoperability (AAMI) project program aims to enable American and British defense industries to use additive manufacturing to make parts.

It demonstrates laser powder bed fusion production qualification methods for critical parts using a multi-phased approach that delivers a structured framework for additive manufacturing suppliers. By leveraging performance-based methods, the project ensures equivalent part production across allied nations, supporting a globally connected and resilient U.S. defense industrial base.

AAMI strengthens supply chain integration by addressing common barriers to additive manufacturing adoption like qualification, certification, and data security.

