



DEPARTMENT OF DEFENSE MANUFACTURING USA INSTITUTES



Quick Start Engagement Guide for U.S. Manufacturers

Strengthen your bottom line!

MAKING THE U.S. MORE COMPETITIVE

The Department of Defense (DoD) Manufacturing USA institutes collectively represent nearly 1,000 organizations including defense and commercial manufacturers of all sizes, start-ups, universities, community colleges, and state or local economic developers in active partnership with the U.S. Federal Government. Since 2012, the DoD has established eight Manufacturing USA institutes, combining \$600 million in federal investment with \$1.2 billion in matching funds from industry, academia and state governments to form centers of excellence promoting U.S. competitiveness.

Each institute is its own public-private partnership and innovation ecosystem providing high value access to world class pilot manufacturing facilities that complement member capabilities, yielding a robust and sustainable domestic 'industrial commons' in a promising technology area. Also critical to U.S. competitiveness is the availability of a well-trained, qualified workforce with manufacturing skills matched to the nation's current and emerging production needs. Each institute has developed a set of education and workforce development activities that can be leveraged by all participants.



ACCELERATING PRODUCT-TO-MARKET LEADS TO STRONGER PERFORMANCE

In this global marketplace, developing the next generation of advanced manufacturing capabilities requires the U.S. to encourage more collaboration between companies, customers and the government in order to conduct the pre-competitive applied R&D necessary for profitable commercialization. A modern 'industrial commons' is needed, where R&D facilities and key manufacturing information are available to U.S. companies of all sizes, allowing them to affordably develop their products for commercial or defense needs. The DoD Manufacturing USA institutes offer an opportunity to leverage pre-competitive R&D into the manufacturing processes that underpin these future product opportunities. They include materials and manufacturing R&D; product design and development; production capacity; visibility into new markets and manufacturing workforce training and education.

"Overall, Lockheed Martin has realized a very high return on its cost-sharing investments in the institutes."

- Mr. Jeff Wilcox, Vice President for Engineering & Program Operations for Lockheed Martin

HIGH VALUE COLLABORATION & FACILITY ACCESS

- *Technology roadmapping*
- *Manufacturing pilot lines*
- *Extensive lab, testing, and prototyping equipment*
- *Industry apprenticeships*

SUPPLY CHAIN MULTIPLIER

- *Collaborative environment brings in new partners*
- *Co-location with much of your supply chain*
- *Small business incubators*
- *Network with industry, academia and DoD*

NEW CAPABILITIES AND MARKETS

- *Small business access to primes and vice versa*
- *Access to intellectual property*
- *Commercialize technology from federal laboratories*
- *Awareness of DoD requirements and future needs*

INCREASED PERFORMANCE & RETURNS

- *Risk reduction through pooled R&D*
- *Participate in federally cost-shared R&D projects*
- *Develop cutting edge technology*
- *Better trained workforce*

Department of Defense Manufacturing USA Institutes Program Office

Office of the Secretary of Defense | Manufacturing Industrial Base Policy Office | Manufacturing Technology Program

For more information visit: www.businessdefense.gov | www.manufacturingusa.com

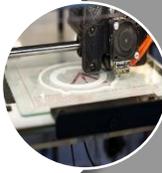
Or email inquires to: osd.mc-alex.ousd-atl.mbx.dod-mfg-usa@mail.mil



America Makes

America Makes: National Additive Manufacturing Innovation Institute
Youngstown, OH | www.americamakes.us

America Makes strengthens U.S. capabilities in 3D printing and additive manufacturing.



DMDII
a UI LABS Collaboration

DMDII: Digital Manufacturing and Design Innovation Institute
Chicago, IL | dmdii.uilabs.org

DMDII leads the nation's research institute into applying cutting-edge digital technologies.



LIFT: Lightweight Innovations For Tomorrow

Detroit, MI | lift.technology

LIFT speeds development of new lightweight metal manufacturing processes.



AIM Photonics: American Institute for Manufacturing Integrated Photonics
Albany & Rochester, NY | www.aimphotonics.com

AIM Photonics accelerates development of the photonic integrated circuit industry.



NextFlex: America's Flexible Hybrid Electronics Institute

San Jose, CA | www.nextflex.us

NextFlex innovates electronic packaging & printing to produce flexible electronic products.



AFFOA: Advanced Functional Fabrics of America

Cambridge, MA | join.affoa.org

AFFOA accelerates widespread commercialization of highly functional fabrics.



BioFabUSA: Advanced Tissue Biofabrication Institute

Manchester, NH | www.armiusa.org

BioFabUSA develops next-generation techniques for cell & tissue biofabrication.



ARM: Advanced Robotics Manufacturing Institute

Pittsburgh, PA | www.arminstitute.org

ARM improves U.S. competitiveness through advancements in smart collaborative robotics.

