



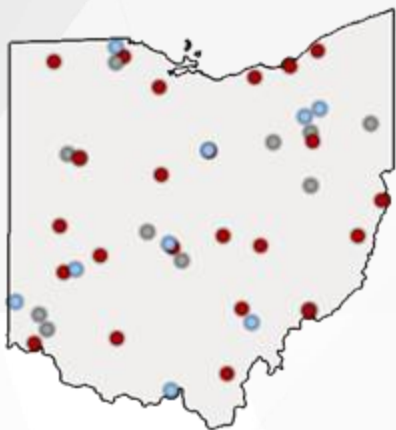
**OhioTechNet**

Partners in Training Ohio's Manufacturing Workforce

# Ohio TechNet Monthly Meeting

**July 21, 2026**

**Thank you for joining us today!**  
**Enter your name and organization in the chat**



### OTN Members:

- Community College
- Technical Center
- University

### Vision

The members of the Ohio Technical Skills Innovation Network, or Ohio TechNet, are nationally recognized for partnering with industry to implement collaborative, innovative solutions that meet manufacturing and tech workforce needs.

### Mission

Ohio TechNet supports workforce development and academic professionals to incubate, develop and sustain programming that accelerates the growth of Ohio's manufacturing & technical workforce.

### Purpose

Ohio TechNet partners benefit from peer-to-peer collaboration, technical assistance and access to resources, making program expansion and innovation at their institution more efficient, faster to implement and easier to sustain.

## Strategic Focus Areas

Ohio TechNet's strategic focus areas provide partners with best practices, models, and technical assistance to address the critical workforce needs in the state.

### Guided Pathways for Youth

### Reaching New Audiences

### Innovative Earn and Learn

### Faculty and Educator Development

### Partnering with Industry

**1****CONNECT****MONTHLY NEWSLETTER**

Subscribe to our monthly newsletter to stay informed about peer-to-peer collaboration opportunities, technical assistance, innovative solutions, and upcoming trainings.

**2****COLLABORATE****CONSORTIUM MEETINGS**

Join our virtual meetings every 3rd Tuesday at 8:30 AM (EST) to explore collaborative, innovative solutions that support workforce and academic professionals across Ohio's educational institutions in addressing manufacturing and tech talent needs.

**3****CONTRIBUTE****OTN RESOURCES**

From industry-aligned partnerships and earn-and-learn programs to faculty development and K-12 outreach, Ohio TechNet offers innovative tools and resources to help institutions and individuals thrive. Visit our website to learn more.



440-366-4215

[ohiotech.net](http://ohiotech.net)[info@ohiotech.net](mailto:info@ohiotech.net)**OhioTechNet**

## Experiential Learning Webinar Series

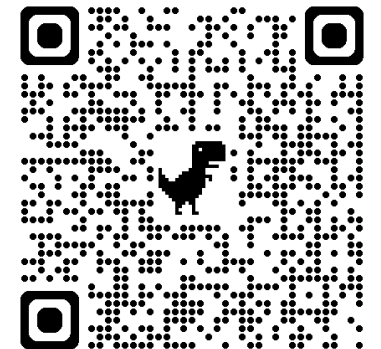
Join the Ohio Association of Community Colleges (OACC) and Ohio TechNet in this dynamic six-part webinar series exploring the full spectrum of experiential learning—from foundational concepts to innovative earn-and-learn models that strengthen pathways into high-demand fields—reimagine what experiential learning can look like on your campus.

### Upcoming Webinars:

**Building Industry Partnerships - July 22, 2026 at 12pm – TOMORROW!**  
**Hear from our partners at Cincinnati State and Owens Community College!**

- Innovative Approaches: Micro-Internships and Project-Based Learning - September 30, 2026
- Leveraging Simulations and Virtual Labs - November 18, 2026
- Recap & Launch of the **Updated** Experiential Learning Replication Guide - December 9, 2026

Register Here: <https://oaccsuccesscenter.regfox.com/experiential-learning-on-your-campus-webinar-series>

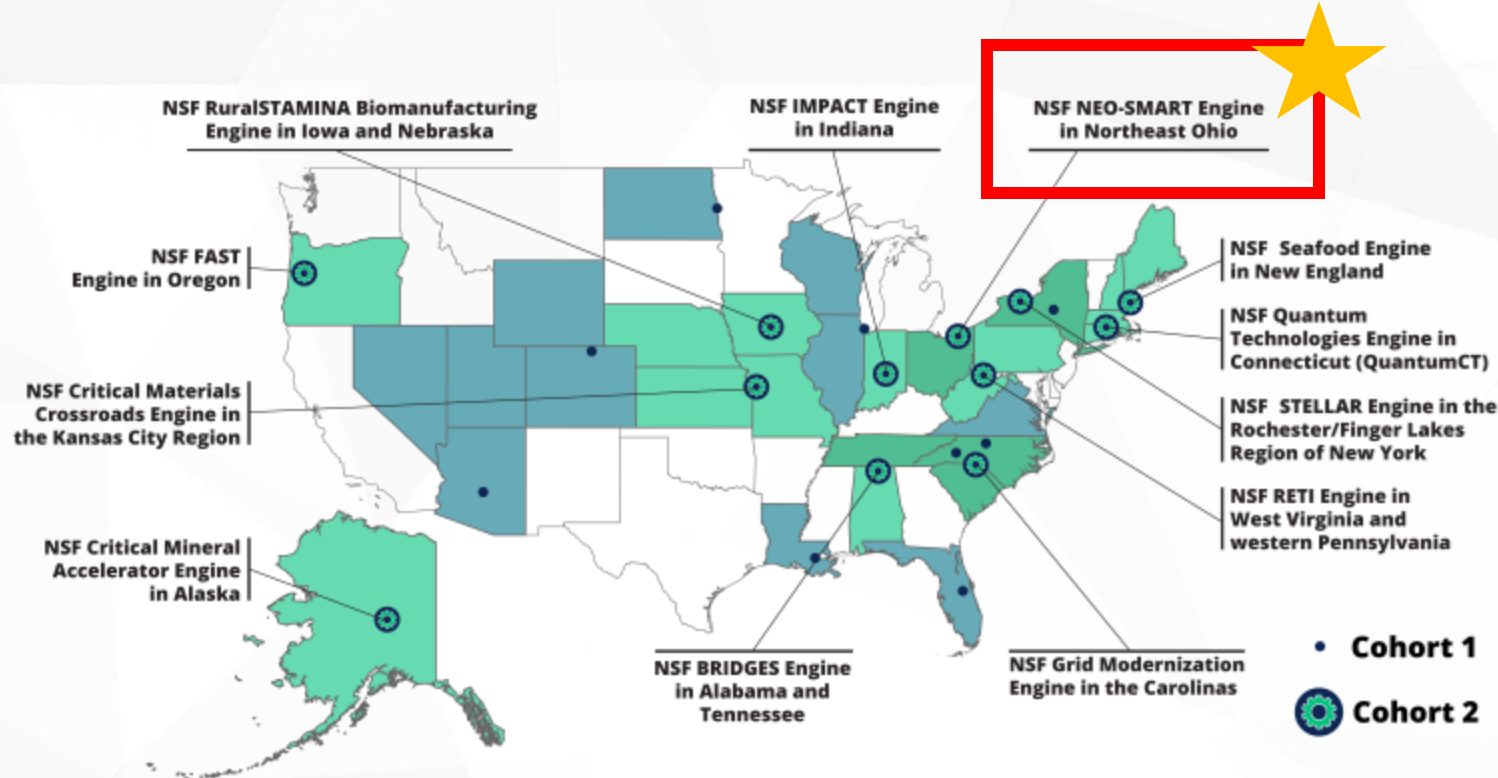


View previous webinar slides and recordings:

<https://ohiotechnet.org/our-work/current-work/webinar-series/>

# NSF NEO-SMART Engine for Northeast Ohio

U.S. National Science Foundation (NSF) has selected the [NSF NEO-SMART Engine in Northeast Ohio](#) for its prestigious [Regional Innovation Engines program](#).



## NEO-SMART's goals are to:

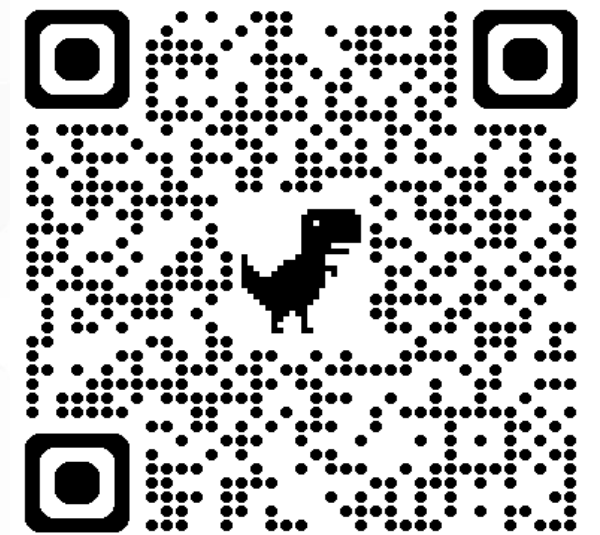
- Create or retain 20,000 jobs across the 18-county region through a strategy to re-industrialize Northeast Ohio. That includes training 12,000 workers over 10 years for “in-demand,” meaningful jobs through new curriculum in materials and manufacturing at the region’s universities and colleges.
- Reinforce domestic supply chains in sectors such as automotive, aerospace, defense and medical devices.
- Propel innovation by advancing key technologies, such as AI/machine learning in manufacturing, and fostering entrepreneurship. The partners plan to increase corporate research and development (R&D) by 50% and support 150 R&D projects over the next 10 years.
- Bolster industry-academic research partnerships that accelerate “lab-to-market” innovation—a strategy to support 1,000 ventures and provide more than 250 “seed” investments for start-up companies.

# Defense Industrial Base STEM Consortium

Participation in the quarterly OTN DIB STEM Think Tank meetings is open to **any OTN member institution or strategic partner**.

Think Tank members will:

- Drive alignment to the workforce priorities of the Department of War, Ohio's defense manufacturers, and the Ohio Manufacturing Workforce Blueprint
- Validate consortium strategies, initiatives, and curricula
- Participate in asset mapping and opportunity assessments
- Accelerate innovation within institutions and disseminate best practices and high-impact models





**FOLLOW**  
**OHIO TECHNET**  
**ON LINKEDIN!**

## **NO AUGUST MEETING**

*Have a great start  
of the semester!*

**NEXT MEETING:**  
**September 15, 2026**  
**8:30am**

## Partnering with Industry

### **America Makes EWD Update: *State of the Art in Additive Manufacturing Production and Workforce Training Opportunities***

**Dr. Edward Herderick, Education and Workforce Development Director at America Makes and the National Center for Defense Manufacturing and Machining (NCDMM)**

This session will explore the state of additive manufacturing production technology, workforce and talent priorities, emerging skill needs, and opportunities for collaboration and partnership between industry, education, and Manufacturing USA.





**America Makes**

National Additive Manufacturing Innovation Institute

# America Makes Education and Workforce Development Pillar

July 20, 2026

Dr. Edward D. Herderick

EWD Director

America Makes

# Outline of my talk

- Overview of America Makes
- Education and Workforce Development Pillar
  - Approach and Strategy
  - Resources for Educators
  - Example projects
- Summary and Future Perspective
  - How can we collaborate more?
  - What are some high priority needs we can support?

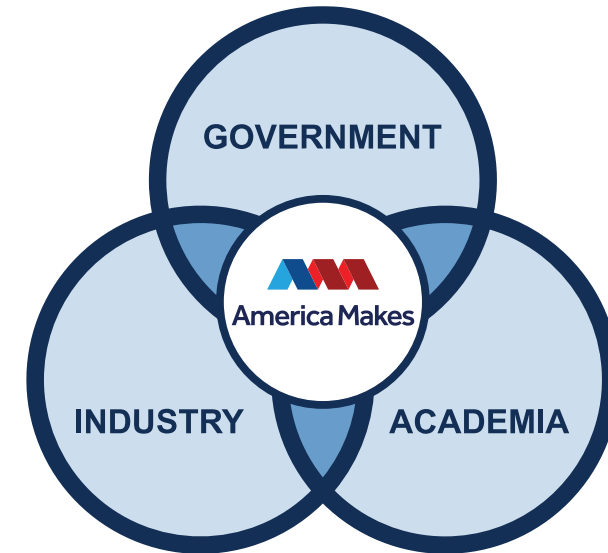
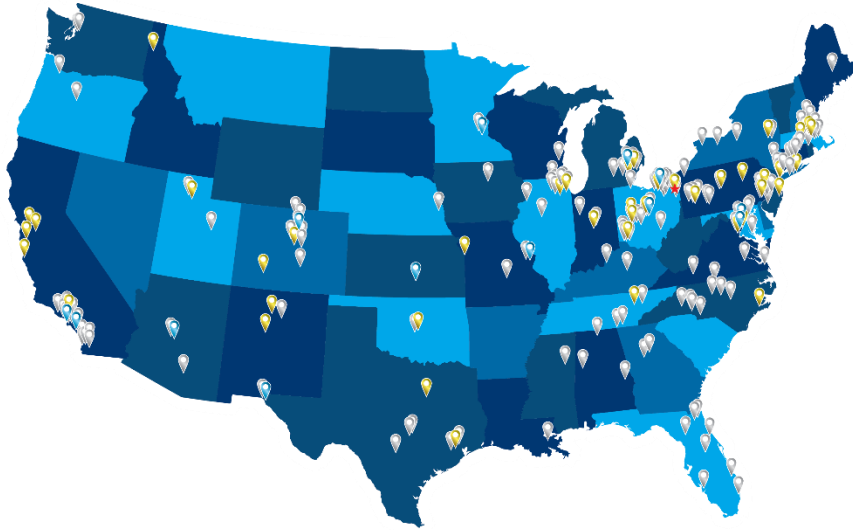
## **What Makes 3D Printing a Special Technology?**

**It's the shortest bridge between the digital and physical world!**

**“I love 3D printing because I get to do engineering and art for my job”  
-Youngping Gao, Founder of Casttheon**

# America Makes

The nation's leading public-private partnership for additive manufacturing



|                         |  |                                                                     |
|-------------------------|--|---------------------------------------------------------------------|
| MII Technology Vertical |  | Additive Manufacturing / 3D Printing                                |
| MII Established         |  | 12 August 2012                                                      |
| Institute Location      |  | Youngstown, Ohio                                                    |
| Non-Profit Legal Entity |  | National Center for Defense Manufacturing and Machining (NCDMM)     |
| Membership              |  | 372 members as of July 2026 from Industry, Academia, and Government |
| Offices in Ohio         |  | Youngstown, Columbus, Mentor                                        |

**VISION**

**To be the driver for additive manufacturing (AM) innovation, technology, and education**

**MISSION**

**Accelerate the adoption of AM to advance U.S. manufacturing competitiveness and security**

**ACHIEVING  
THE  
MISSION**

**CONVENING** the most brilliant minds from government, industry, and academia to accelerate AM innovation

**COORDINATING** AM technical and workforce data to transform industry

**CATALYZING** industry through collaborative projects, delivering high value and high impact

# Membership Resources

## Networking



- MMX and TRX events
- Workshops, tradeshows, and conferences
- Working groups

## Business Opportunities



- Access to funding (project calls and directed projects)
- Meet and collaborate with suppliers, peers and customers

## Member Resources



- Member Portal
- Strategic account management
- @Program app
- Our fantastic membership team

## Working Groups



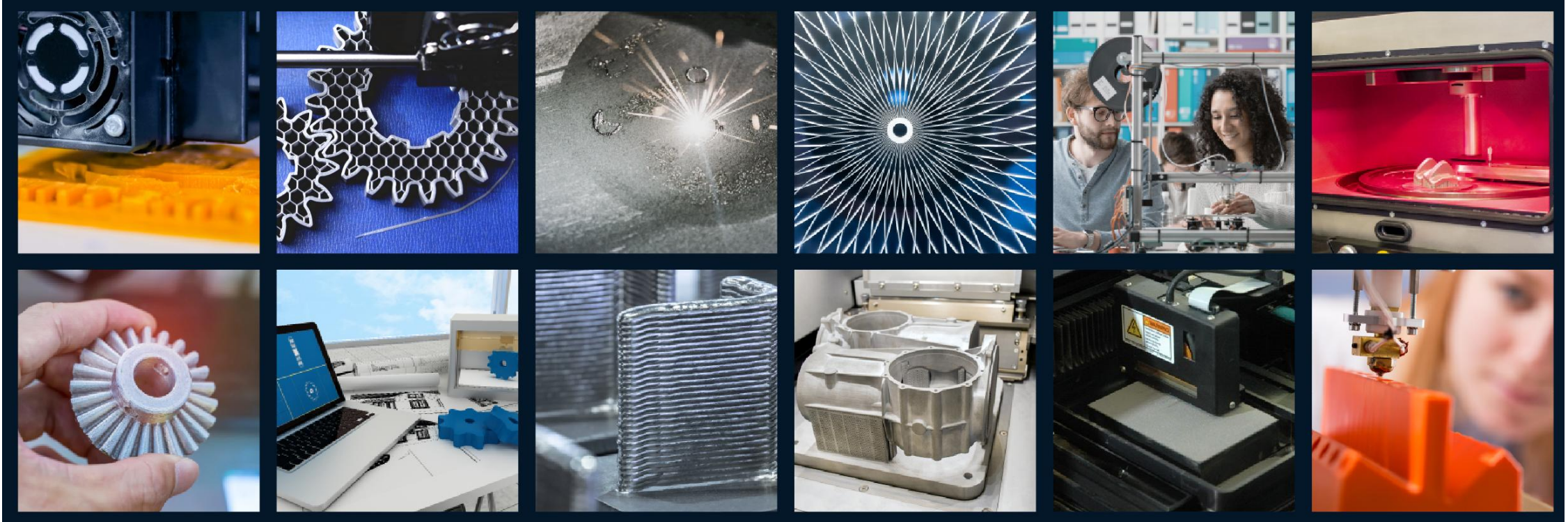
- Curate the Technology Roadmap
- Learning with and from fellow members
- Prioritize topical areas for project calls

## Access to Projects



- Access to project deliverables via CORE
- Experimental data sets
- Presentations from TRX and MMX events

**Bottom Line Up Front: 3D Printing and Industrial Additive Manufacturing are ubiquitous across industries, materials classes, and price points... we're really in a golden age of innovation!**



**America Makes has a comprehensive 3D Printing Education and Workforce Development Pillar:**

**More info available here: <https://www.americamakes.us/amnation/tools/>  
And here: <https://amnation.americamakes.us/>**

# America Makes Education and Workforce Development Approach

## Strategy

- Define key **learner personas** mapping their challenges, needs, and opportunities
- **Integrated approach** with technology and industrial base implementation pillars
- Approach includes **partnering to scale impact**

## Digital Assets

- Applying state-of-the-art **EdTech approach** to integrating asynchronous and in person learning
- Building with partners with existing LMS systems to reach learners
- Focus on providing **access to training** across high priority personas

## Small Businesses

### Vision Statement:

- “Any small business interested in adopting additive manufacturing in the industrial base is empowered to do so with deep tech resources including how-to guides, return on investment resources, networking, and case studies.”

## DoW Capability Growth

### Vision Statement:

- “The DoW will have the trained workforce and capabilities needed to deploy additive manufacturing whenever and wherever it’s required--across the organic industrial base, defense sector, and in expeditionary environments.”

**Expanding supply chain capacity through focused, industry-grounded additive manufacturing EWD efforts**



This portal offers access to America Makes EWD assets, including self-guided microlearning modules, small business guides, and additive manufacturing programs for industry, educators, and students.

[Visit →](#)



This platform provides the defense community and industrial base with tailored, state-of-the-art additive manufacturing training resources.

[Visit →](#)



This publicly accessible web-based toolkit offers expert-curated additive manufacturing lifecycle content and detailed use cases to support training development for educators and manufacturers.

[Visit →](#)



ToolingU, a leading provider of online training for the manufacturing industry, offers 600+ interactive courses, available 24/7 on multiple devices, including additive-focused, self-paced courses contributed by America Makes members.

[Visit →](#)





This program – Driving Research, Innovation, and Value through Education in Advanced Manufacturing – combines robust curriculum, hands-on training, and learning assets to empower individuals and organizations in the evolving AM landscape.

Visit →



AMJobs acts as a “front door” to the additive manufacturing industry, offering a free and engaging way for individuals to learn about AM careers, understand the skills required, and find resources to pursue those opportunities.

Visit →



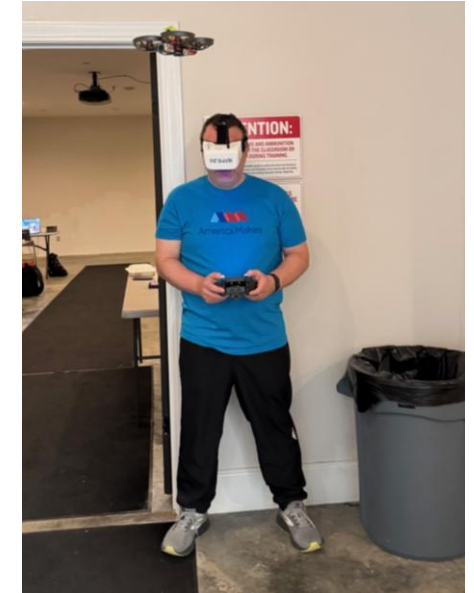
Edge Factor inspires future careers through real-life tech success stories, offering 5000+ videos, interactive activities, lesson plans, and career tools featuring additive manufacturing content developed with America Makes members.

Visit →

# EWD Current Activities in 3D Printing for Drones

The Institute is at the cutting edge for bringing together the additive and drone communities. America Makes EWD Pillar has launched a series of activities to engage our members and support our stakeholders:

- High School Summer Camp on 3D printing for Drones
  - Adapting content for a Manufacturing Day Activity
- KSA mapping for 3D printing for UAVs and Drones course
- Supporting the US National Drone Association Crucible competition



## **Summary of the AM Industry in 2026:**

- Industrial Additive Manufacturing has exponentially improved since it's original inventions in the early 1990's. The trend will continue, leading to transformational products
- 3D Printing is now a foundational, platform technology for many industrial applications
- Additive Manufacturing is at the leading edge for bringing together design, materials, and manufacturing in a new paradigm of "Adaptive Manufacturing"

## **What are the ideal Knowledge, Skills, and Abilities for an Additive Manufacturing Engineer in 2026:**

- Domain Expertise in fundamentals of chosen field of technology or engineering
- Hands on understanding of manufacturing and the shop floor
- Appreciation for the synergistic interaction of product design, lean manufacturing and development, and operating environment for products and devices
- Creative approach to design thinking and physics driven design of products

# Closing Discussion

- Ideas, reflections, reactions to any of the projects or activities?
- Suggested Actions?
  - Ideas for how we deepen Education and Workforce Development pillar engagement with our volunteers and stakeholders across Ohio?
  - High priority topic areas for EWD we could explore?
  - Other?



# America Makes

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**When America Makes, America Works®**

Distribution Statement A: Approved for Public Release