

America Makes – Managing the Mission Mentor Protégé Summit

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VISION

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

MISSION

Accelerate the adoption of AM to advance US 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

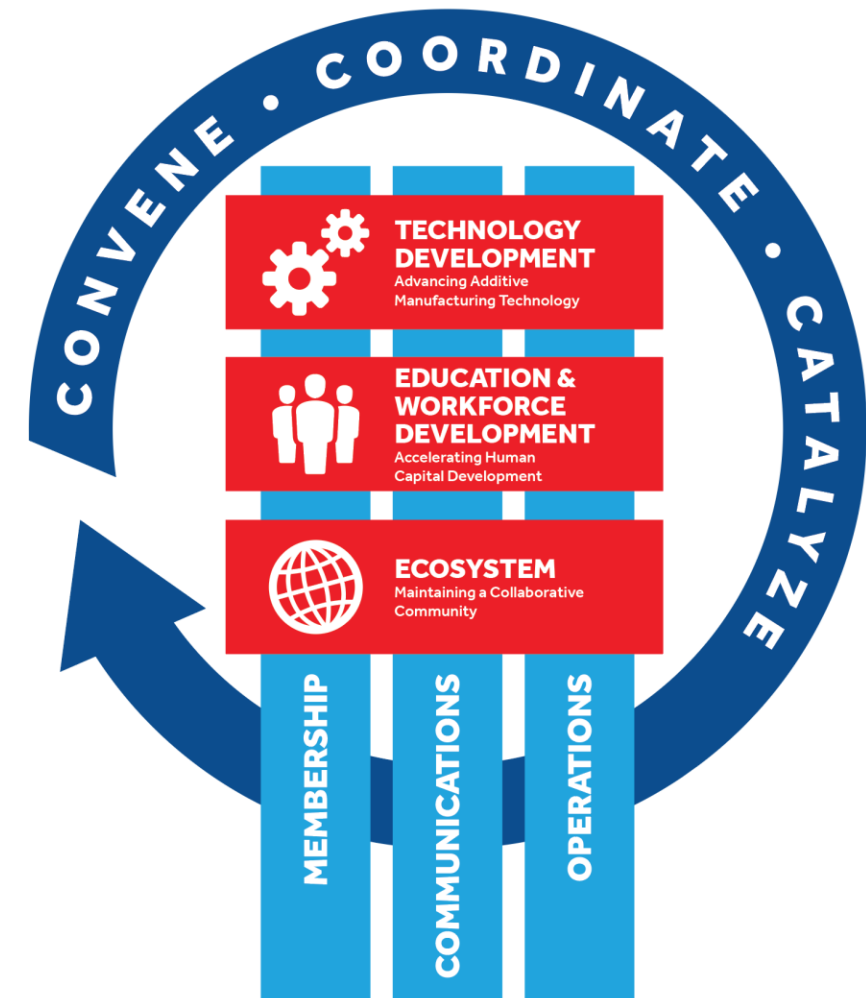
CATALYZING industry through collaborative projects, delivering high value and high impact

The three core activities of the Institute are:

- **Develop Additive Manufacturing Technology:**
Projects, Innovation, Technology Transfer, Implementation
- **Accelerate Human Capital Development:**
Workforce, Education, Training, Outreach
- **Maintain Collaborative Ecosystem:**
Government, Membership, Community

These focus areas are enabled by:

- **Membership:** Driving engagement and collaboration with our nation's brilliant minds from government, industry and academia to advance Additive Manufacturing
- **Communications:** Driving awareness and spreading the word to government, members, stakeholders, community
- **Operations:** Run by a not-for-profit organization with a lean and collaborative structure



Technology Advancement and Collaboration through Partnership

- Coordinating known stakeholder needs
 - Unique by member type
 - Academia, Industry, Gov't, Non-profit, National Labs

- Establishing priorities
 - Defining gaps and opportunities
 - Milestone, objective, and requirement-based approaches
 - Leveraging diverse expertise to target benefits and impact

- Leveraging collective intelligence/capabilities for applied learning
 - Execution mechanism
 - Many similarities to supply chain development



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Strengthen Warfighter Capability Needs and Domestic Manufacturing Competitiveness

Executing the Mission

Thought
Leadership

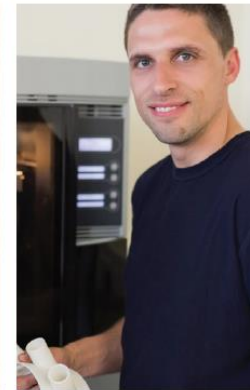
EWD
Roadmap &
Inventory

Industry
Recognized
Credentials

Educational
Outreach
“K-Grey”

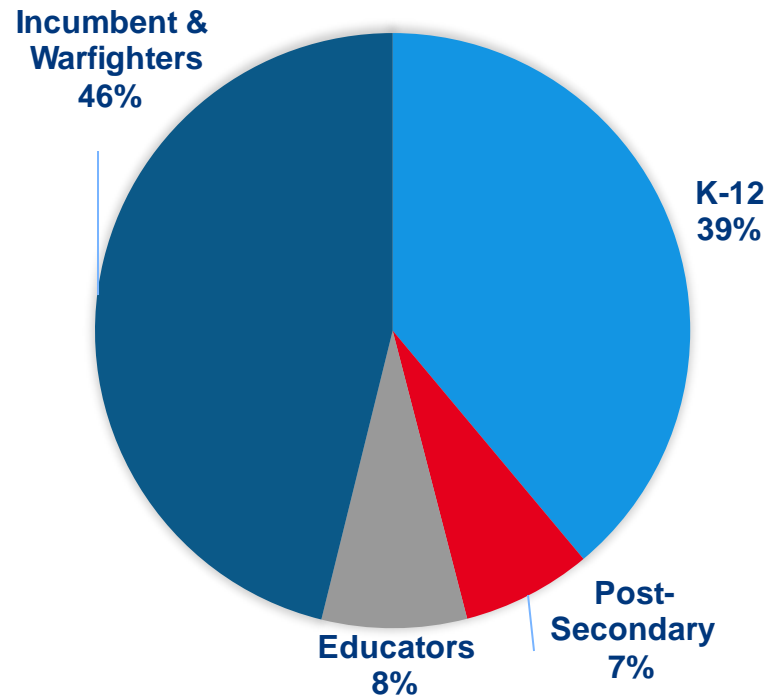
Tailored AM
Training

Inspiring, preparing and growing today and tomorrow’s talent pipeline in additive manufacturing

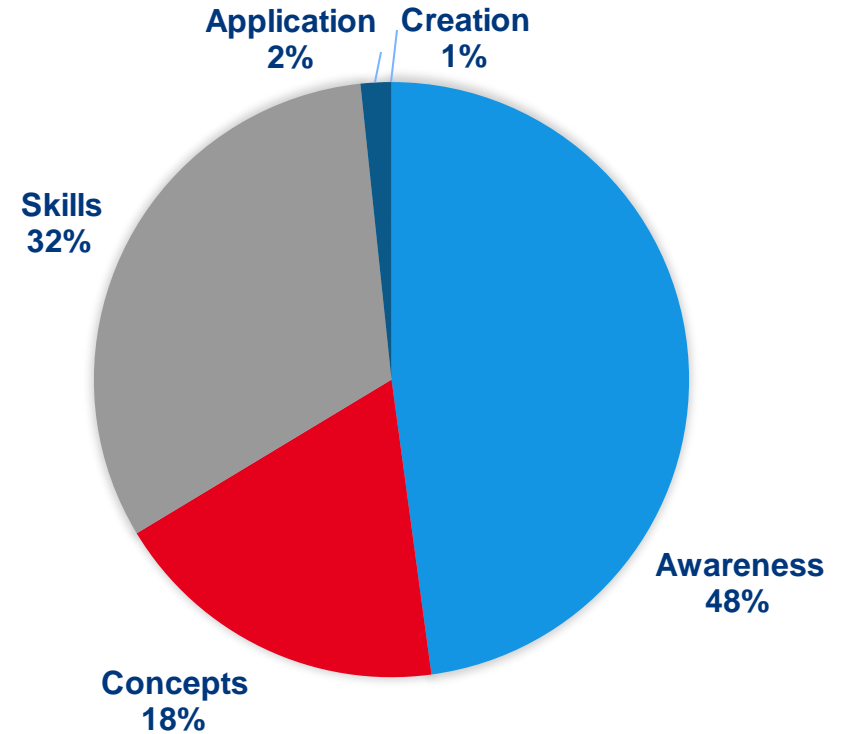


Metrics Breakdown

EWD AUDIENCE



LEVEL OF LEARNING



Over 1300 learners received a credential or certification
Nearly 200 educators and train the trainers have received training to deploy EWD Assets
Launching/Launched EWD Programming at over three dozen schools this fall

Answering the Call – Supporting DoD

	JAMWG - AMMO	AMPED	OPNAV	Drive AM	SWARM
Program	CA3	Additive Manufacturing Portal for Education	Naval Civilian Workforce Development	Driving Research, Innovation, and Value through Education in AM	Scaled Workforce Assets in Regionalism for Manufacturing
Funder	Core Funding and Activity	Office of Secretary of Defense	Navy OPNAV (Navy Operations)	Congressional Interest Item	State of Ohio, Industry and Philanthropic Organizations, Office of Local Defense Comm. Coop.(OLDCC)
Audience	Secondary Education, Incumbent Workers, Mainstream Adults, Defense, Veterans	Secondary and Post-Secondary Education, Incumbent Workers, Defense, Veterans	Navy Civilian Artisans: Apprentice, Journeyworker Mastercraftsman	Incumbent Workers, University, and Defense	K-12, Incumbent Workers, Mainstream adults, Community College
Objective	Support the OSD and DoD mission, vision, and purpose as it pertains to the DoD and adoption and optimization of AM. Be an available partner in the creation and scale of impactful and meaningful programming across stakeholders in the DoD and industry defense base.	Creation of a new technology tool linking identified and vetted job roles and competencies which are aligned to the AM Body of Knowledge, to relevant training assets within America Makes, the DoD, industry and academia	Navy directed project in collaboration with OPNAV to build a three-tiered apprenticeship pathway in AM for Navy Civilian Artisans. Program aligns all new content to DoL registered apprenticeship as well as industry credentials	Creation of deep dive training resources across a broad range of AM technologies to impact post-secondary students and defense personnel. Drive AM also includes internships embedded in America Makes members as well as lab capabilities	Varied of projects built with a diverse set of funders to scale programs to meet the strategy of “National Strategy – Local Impact” To date 16 focused regions exist across the nation and growing. SWARM funding is over \$5 million
Impact	Over 10,000 trained via eLearning and instructor led training	Active Program to scale in 2023	Active Program 38 trained in program pilots	Over 2,000 trained within the DoD and Industrial Base	Over 8,000 and counting across all EWD audiences

Why An Ecosystem Approach?

There are **32,540,953 million small businesses** in the U.S.

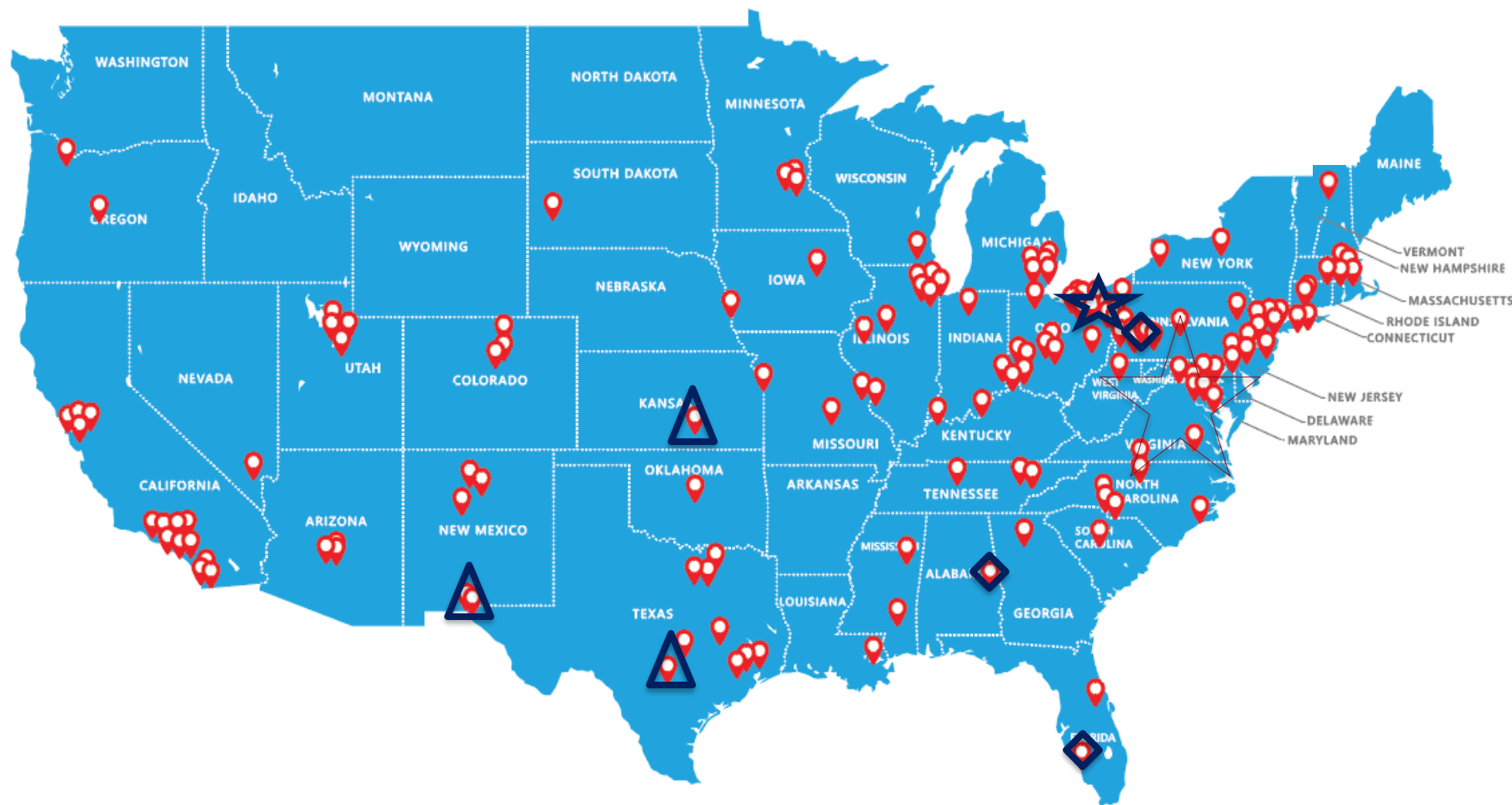
- **19 percent**, or 6,055,421 firms, have paid employees
- There are **20,516 large businesses**.

The majority of manufacturing firms in the United States are quite small.

- There are **246,155 firms in the manufacturing** sector
- ALL but 3,960 firms considered to be small (i.e., fewer than 500 employees).
- In fact, **3/4 of these firms** have fewer than **20 employees**.

(Source: U.S. Census Bureau, Statistics of U.S. Businesses)

Geographic Representation of America Makes Membership



- 42 States are represented by America Makes members.
- More information is needed to more accurately represent the additive manufacturing ecosystem.

- ◆ NCDMM
- ★ HQ
- △ Satellite Centers

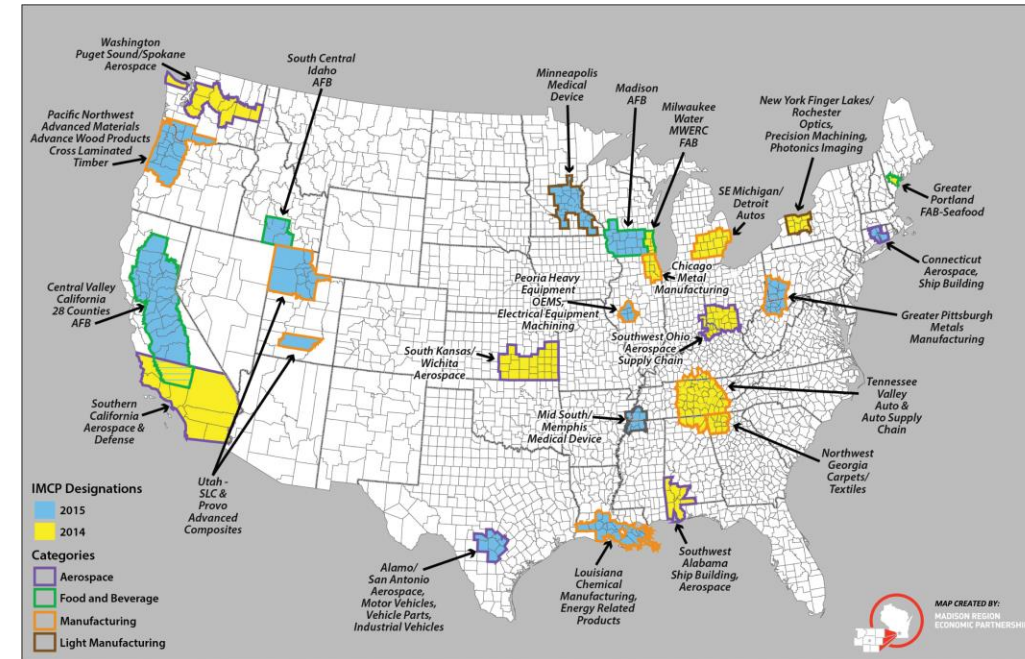
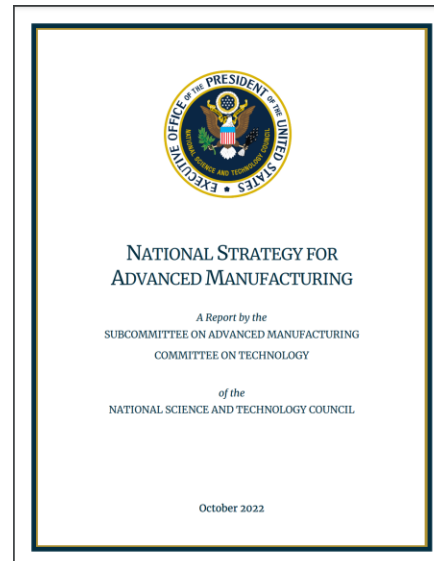
Accelerate Adoption of AM to Ensure Warfighter Readiness and US Competitiveness

Components of a Functioning Ecosystem

- Technology Development
- Technology Transfer
- Education & Training
- Equipment Availability
- Business Formation
- Innovation and Know How
- Talent – all levels across the enterprise
- Capital – all stages of growth
- Dealmakers and Connectors
- POLICY and VISION

Create Ecosystem for AM business to Form, Grow and Thrive

- Aligning Regional Networks
- Assessing Technology Gaps
- Developing Suppliers to use AM for Defense
- Supporting AM Adoption & Innovation in States
- Policy Alignment



24 DESIGNATED COMMUNITIES. SOURCE: U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

When America Makes America Works



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