# Advanced Manufacturing

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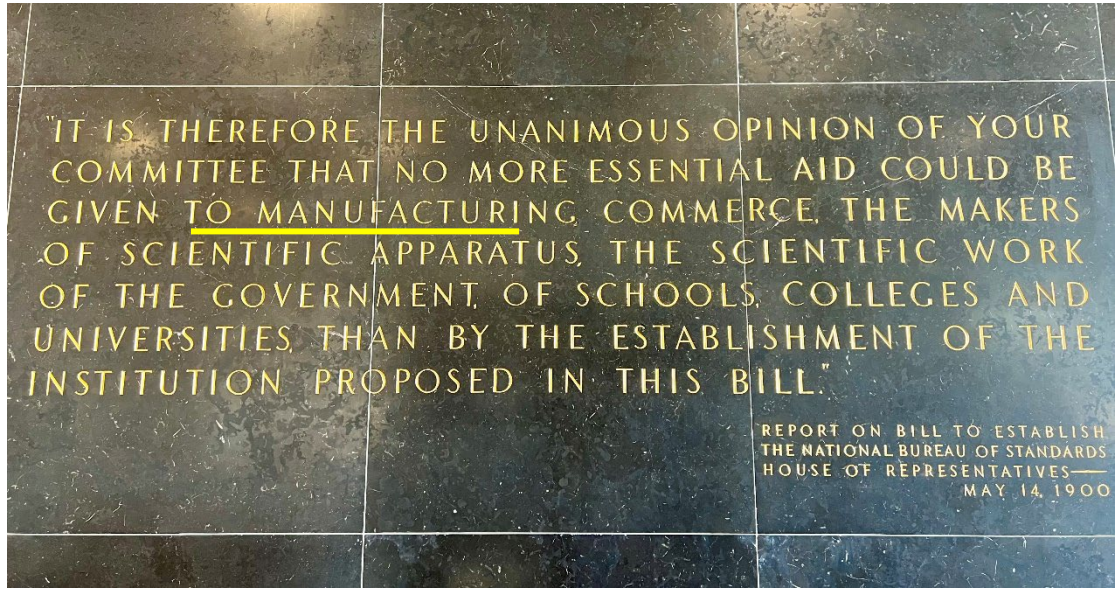
# Advanced Manufacturing

> How can the United States secure its position as the unrivaled world leader in critical and emerging technologies — such as artificial intelligence, quantum information science, and nuclear technology — maintaining our advantage over potential adversaries? We need to **accelerate research and development**, dismantle regulatory barriers, **strengthen domestic supply chains and manufacturing**, spur robust private sector investment, and advance American companies in global markets.





**A National Priority:**

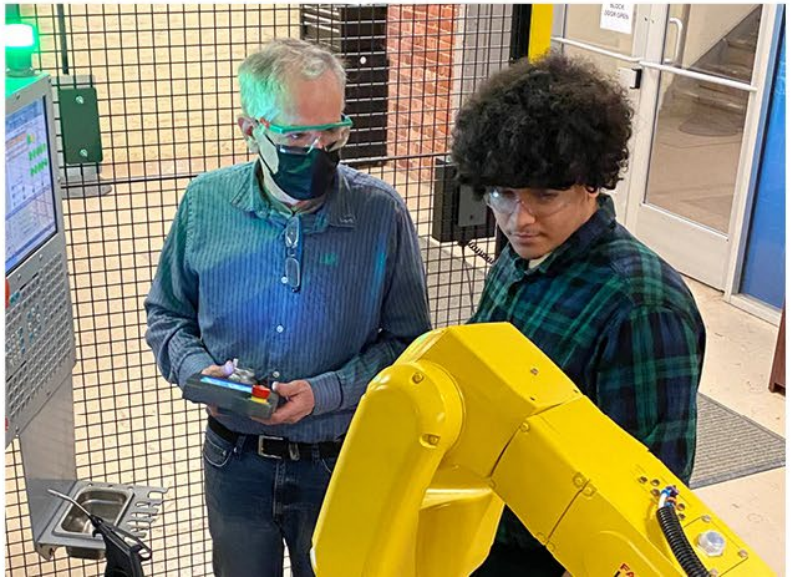
- Economic and national security
- Industrial competitiveness
- Critical and emerging technologies

# About Manufacturing USA

**VISION**: Securing U.S. Global Leadership in Advanced Manufacturing

**MISSION:** Connecting people, ideas, and technology to:

- Solve industry-relevant advanced manufacturing challenges
- Enhance industrial competitiveness and economic growth
- Strengthen our economic and national security

# Manufacturing USA Institutes

## ELECTRONICS

**AIM Photonics** — Integrated Photonics
*Albany, NY*
*Rochester, NY*

**NextFlex** — Flexible Hybrid Electronics
*San Jose, CA*

**Smart USA** — Digital Twins for Semiconductor Manufacturing
*Durham, NC*

**PowerAmerica** — Wide Bandgap Semiconductors
*Raleigh, NC*

## MATERIALS

**AFFOA** — Advanced Fibers and Textiles
*Cambridge, MA*

**IACMI** — Advanced Composites
*Knoxville, TN*

**LIFT** — Materials
*Detroit, MI*
*Caguas, Puerto Rico*

**REMADE Institute** — Sustainable Manufacturing
*Rochester, NY*

## DIGITAL/AUTOMATION

**America Makes** — Additive Manufacturing
*Youngstown, OH*
*El Paso, TX*

**ARM Institute** — Advanced Robotics
*Pittsburgh, PA*

**CESMII** — Smart Manufacturing
*Los Angeles, CA*

**CyManII** — Cybersecurity in Manufacturing
*San Antonio, TX*

**MxD** — Digital Manufacturing
*Chicago, IL*

## BIOMANUFACTURING

**BioFabUSA** — Regenerative Manufacturing
*Manchester, NH*

**BioMADE** — Bioindustrial Manufacturing
*St. Paul, MN*

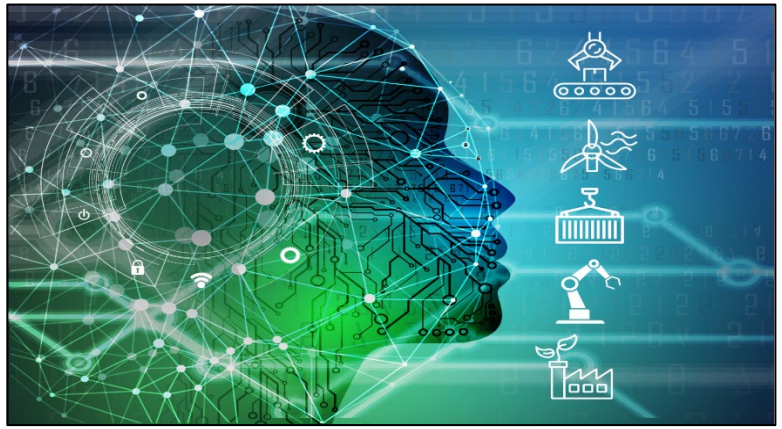
**NIIMBL** — Biopharmaceutical Manufacturing
*Newark, DE*

## ENERGY/PROCESSES

**EPIC** — Electrified Industrial Processes
*Tempe, AZ*

**RAPID** — Modular Chemical Process Intensification
*New York, NY*

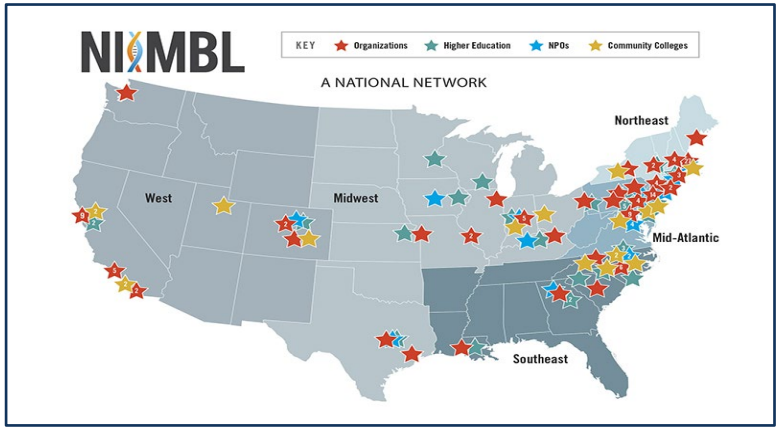
# DOC Manufacturing USA Institutes



## AI for Resilient Manufacturing

Reviewing applications:

up to $70 million over five years




## NIIMBL

National Institute for Innovation in Manufacturing Biopharmaceuticals

SMART USA TM

Semiconductor Manufacturing and Advanced Research with Twins **USA**

Semiconductor Research Corporation

## SMART USA

Semiconductor Research Corporation Manufacturing Consortium Corporation (SRCC) awarded $285 million over five years

CHIPS for AMERICA | Manufacturing USA

# Updates




## New MFG USA Strategic Plan

Increase competitiveness of U.S. manufacturing

Facilitate the transition of innovative technologies

Accelerate the development of the workforce

## NASEM Study

A Vision for the Manufacturing USA Program in 2030 and 2035

Goal: Recommend ways to strengthen technology transfer, scale-up, and workforce development

## Benchmarking with China's MICs

A review of China's 33 Manufacturing Innovation Centers w/ goals from the "Made in China 2025" national strategy

# Next: Accelerate Technology Adoption

**VISION**

NIST accelerates the **adoption** of **advanced technologies** by domestic manufacturers that strengthen U.S. industrial **competitiveness**.

**STRATEGY**

- Identify and select critical manufacturing areas
- Identify the key barriers (technical, financial, infrastructural) to adoption at scale by industry
- Provide integrated solutions that leverage NIST expertise, partnerships, and programs
- Leverage other agency partners, i.e. DoD DIB
- Catalyze capital investment

**NIST Laboratories**

- World-class expertise
- Research facilities
- Standards
- Measurement services

**Manufacturing USA**

- 18 advanced manufacturing areas
- Public-private partnerships
- Strong interagency partnerships