

# NNMI AND NIST

## BY THE NUMBERS

**5**  
Institutes for  
Manufacturing  
Innovation  
are up and  
running



**300+**  
Companies and  
universities  
are Innovation  
Institute  
members

**\$70-120**  
**million**

Federal  
investment per  
institute over five  
to seven years— all matched by  
private-sector funds



**\$481 million**

in private funding has been  
invested in the institutes so far

## The Challenge

As global competition continues to increase, the United States must find ways to foster the innovation that produces economic growth and creates well-paying middle-class jobs. Advanced manufacturing plays a key role in this process. A national effort to create regional hubs focused on manufacturing innovation will accelerate development and adoption of cutting-edge manufacturing technologies for new products that compete in international markets.

## What is the NNMI?

The National Network for Manufacturing Innovation (NNMI) provides a manufacturing research infrastructure where U.S. industry and academia collaborate to solve industry-relevant problems. The NNMI is a network of Institutes for Manufacturing Innovation that each has a unique focus, but a common goal to create, showcase, and deploy new capabilities and new manufacturing processes.

## What NIST Does

- Hosts the Advanced Manufacturing National Program Office (AMNPO), an interagency team including NASA, the National Science Foundation, and the departments of Commerce, Defense, Education, and Energy, that manages an open, competitive selection process for the creation of new institutes.
- Via AMNPO, enables effective collaboration in identifying and addressing challenges and opportunities that span technology areas and cut across agency missions.
- Shares best practices across the institutes to ensure lessons learned are disseminated by the network.
- Links federal efforts to a growing number of private-sector initiatives.

## Recent Program Highlights

- In January 2014, the NNMI launched the Next Generation Power Electronics Manufacturing Innovation Institute at North Carolina State University. This institute includes 25 members and provides shared facilities, equipment, and testing and modeling capabilities to help companies across the power electronics supply chain invent, design and manufacture new semiconductor chips and devices.
- In February 2014, the NNMI launched the Digital Manufacturing and Design Innovation Institute, located in Chicago, Ill., and led by UI Labs. This institute includes 73 companies, universities, nonprofits, and research labs working together to address the life cycle of digital data interchanged among myriad design, engineering, manufacturing and maintenance systems, and flowing across a networked supply chain.
- In February 2014, the NNMI launched the Lightweight and Modern Metals Manufacturing Innovation Institute, near Detroit, Mich., and led by EWI. This 60-member consortium pairs leading manufacturers with universities and small businesses to develop processes that accelerate scale-up of production of lightweight alloys.
- In January 2015, the NNMI launched the Institute for Advanced Composites Manufacturing Innovation (IACMI) at the University of Tennessee-Knoxville. This consortium of 122 companies, nonprofits, and universities will seek to develop lower-cost, higher-speed, and more-efficient manufacturing and recycling processes for advanced composites.

## FY 2016 Budget

NIST is requesting \$150 million to support the NNMI. With the requested funds, NIST will focus on:

- Establishing and managing the NNMI network.
- Collaborating with the existing pilot institutes to establish a framework for network management and operations to support coordination among the institutes.
- Developing network governance processes to support productive interactions among institutes.
- Conducting open competitions for two additional institutes on topics proposed by industry.

## Program Goals

- **Accelerate innovation and implementation** of advanced manufacturing capabilities.
- **Establish an initial network of up to 15 regional institutes—** each with a unique technology focus.
- **Foster sustainable, industry-led institutes** designed in partnership with industry, academia, non-profit organizations, and states.