

MEP National Network Overview

National Academy of Science, Engineering and Medicine (NASEM)
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<https://www.nist.gov/mep/mep-national-network>



A unique public-private partnership that delivers comprehensive, proven solutions to U.S. manufacturers, fueling growth and advancing U.S. manufacturing.

Our mission is to **strengthen and empower U.S. manufacturers.**



MEP National Network Map and Sample of Services

Workforce

Supply Chain/
Supplier Scouting

Industry 4.0 /
Advanced Mfg
Technology Services

Cybersecurity
Services

Risk Mitigation

Tech Scouting/
Tech Driven Market
Intelligence

Lean / Toyota Kata

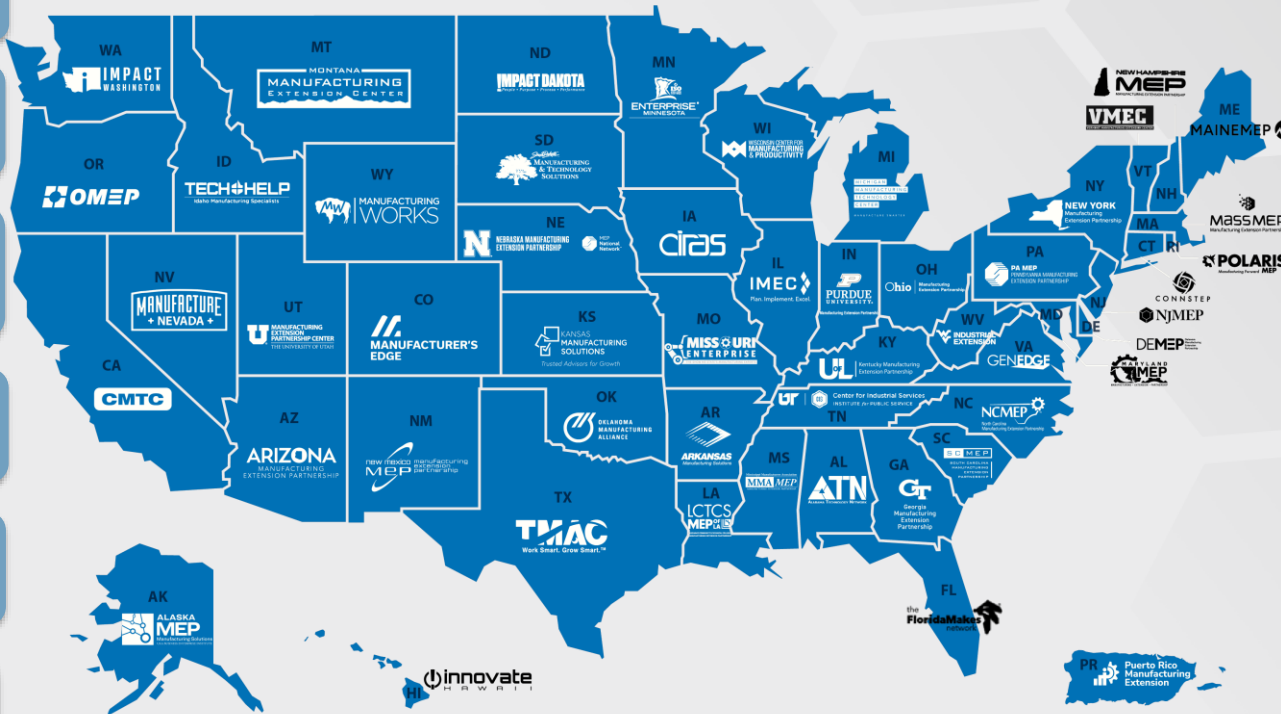
Exporting
& Reshoring

Food Industry
Services

Sustainability

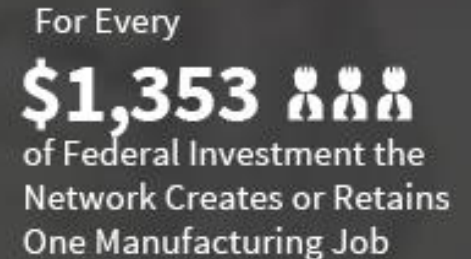
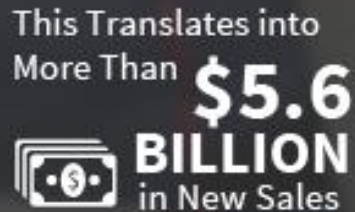
Business Growth
Services

ISO & Quality
Management





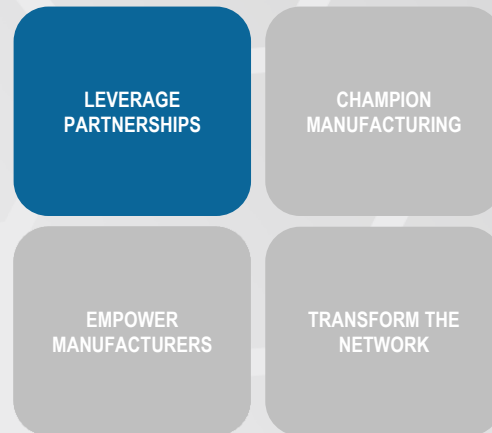
Empowering Manufacturing: 2022 Impact Survey Results





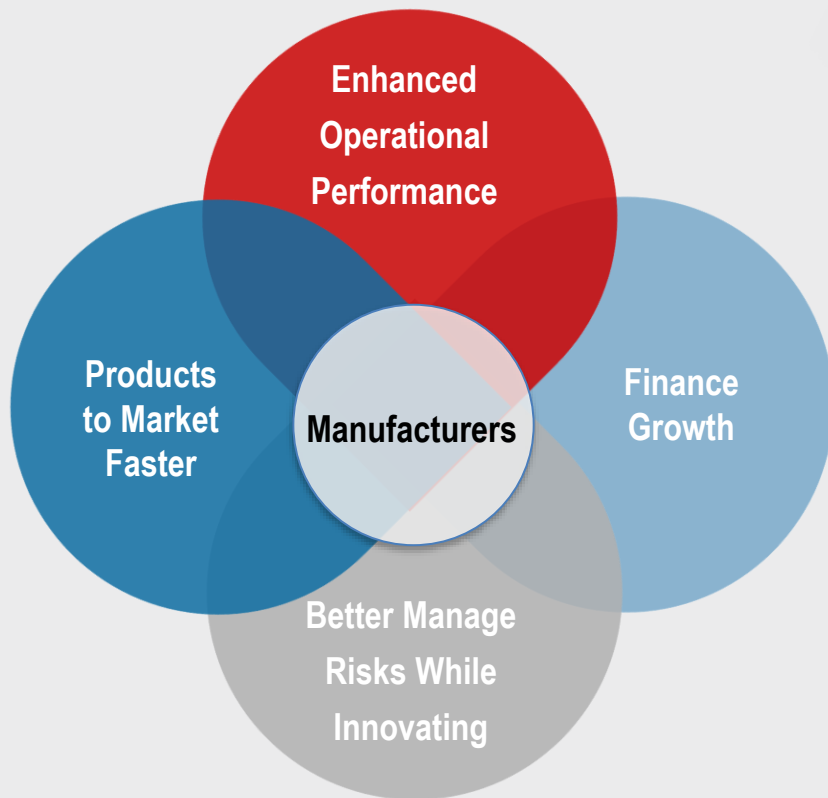
MEP National Network Strategic Partnerships

- The MEP program
 - Serves as a bridge to other organizations and federal research labs that share a passion for enhancing the manufacturing community
 - Fosters, develops and leverages these relationships
 - Permits MEP Centers to expand the reach and value of the program to the manufacturing industry





Value of Partnerships



- Public-private partnerships can bring to manufacturers capabilities that they cannot access alone
- Our understanding of and ability to align state, regional and local policy goals and objectives with national policy goals, leverages the strength of each entity



MEP Centers Connect Manufacturing Ecosystems



***Based on MEP Center Partner reporting in MEIS as of February 2022



Innovating the Ecosystem with Our Partners



Economic
development
organizations



Federal agencies
& laboratories



Industry leaders
& think tanks



Manufacturing
USA



State & local
government



Universities,
community colleges
& technical schools



Trade associations
& other partners



Existing Partnerships

Federal Government Partners:

EDA Economic Development District
EDA Trade Adjustment Assistance Center
EDA University Center
Federal Laboratory
DOE Industrial Assessment Center
Procurement Technical Assistance Center
Small Business Development Center (SBDC)
ITA US Export Assistance Center

Associations:

Chamber of Commerce
Industry/Trade Association

State/Local Government Partners:

Local government (e.g., Mayor or Council)
State Commerce/Economic Development Agency
State Energy/Environment Protection Agency
State Science or Technology Agency
State Workforce/Labor Agency

Higher Education:

Community Colleges
Technical College
University

Local/regional Economic Development Orgs:

Workforce Investment Board

Non-Profit Orgs:

Foundations
Manufacturing Alliances

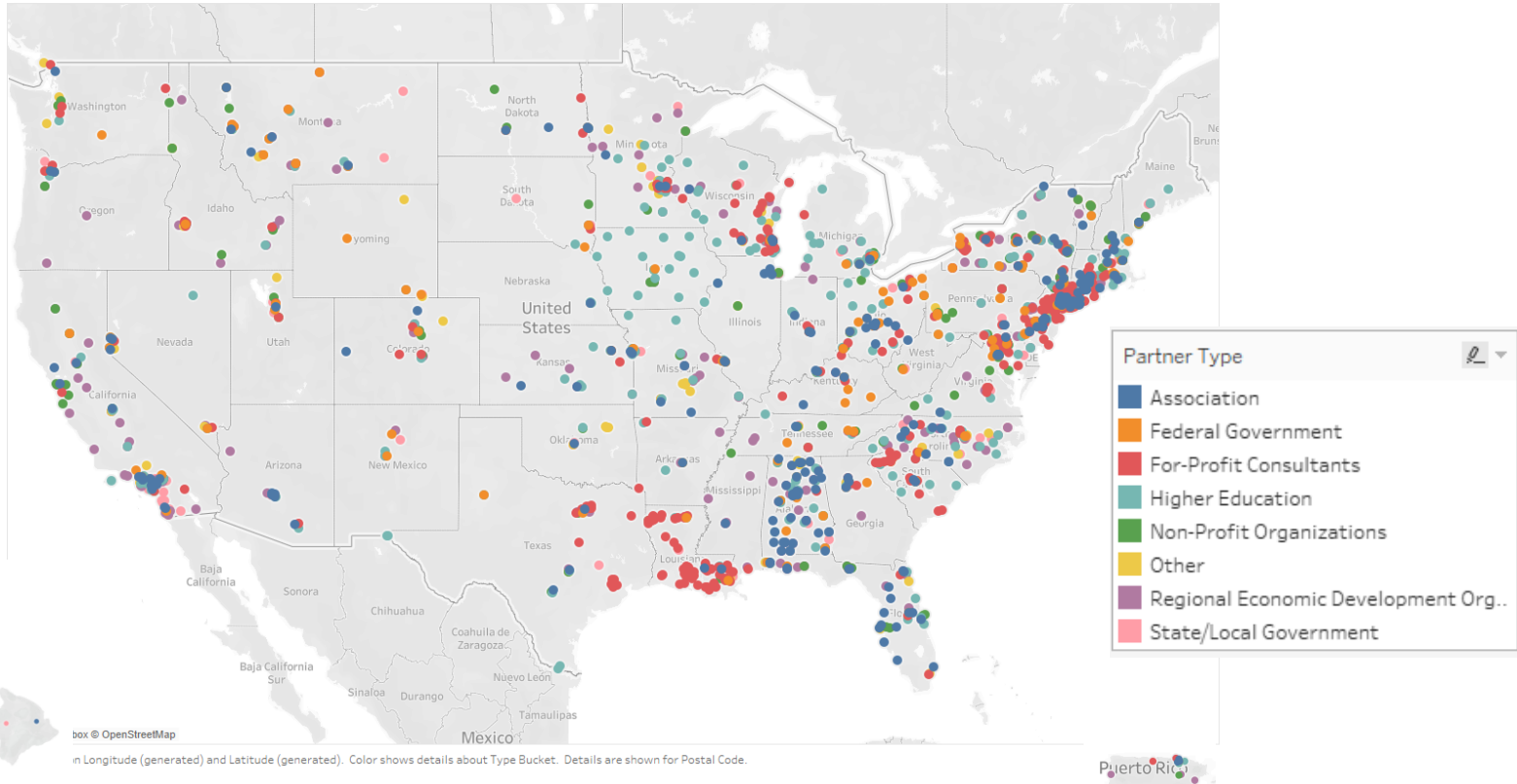
Other Partners:

Other MEP Centers
Power/utility
Manufacturers



MEP Centers Connect Manufacturing Ecosystems

MEP National Network Partners by Type and Zip Code





Helping SMMs Overcome Challenges



**Narrowing the
workforce gap**



**Mitigating supply
chain vulnerabilities**



**Leveraging
technology**



Narrowing the Workforce Gap

Enable SMMs to navigate the workforce shortage while improving productivity and profitability through:

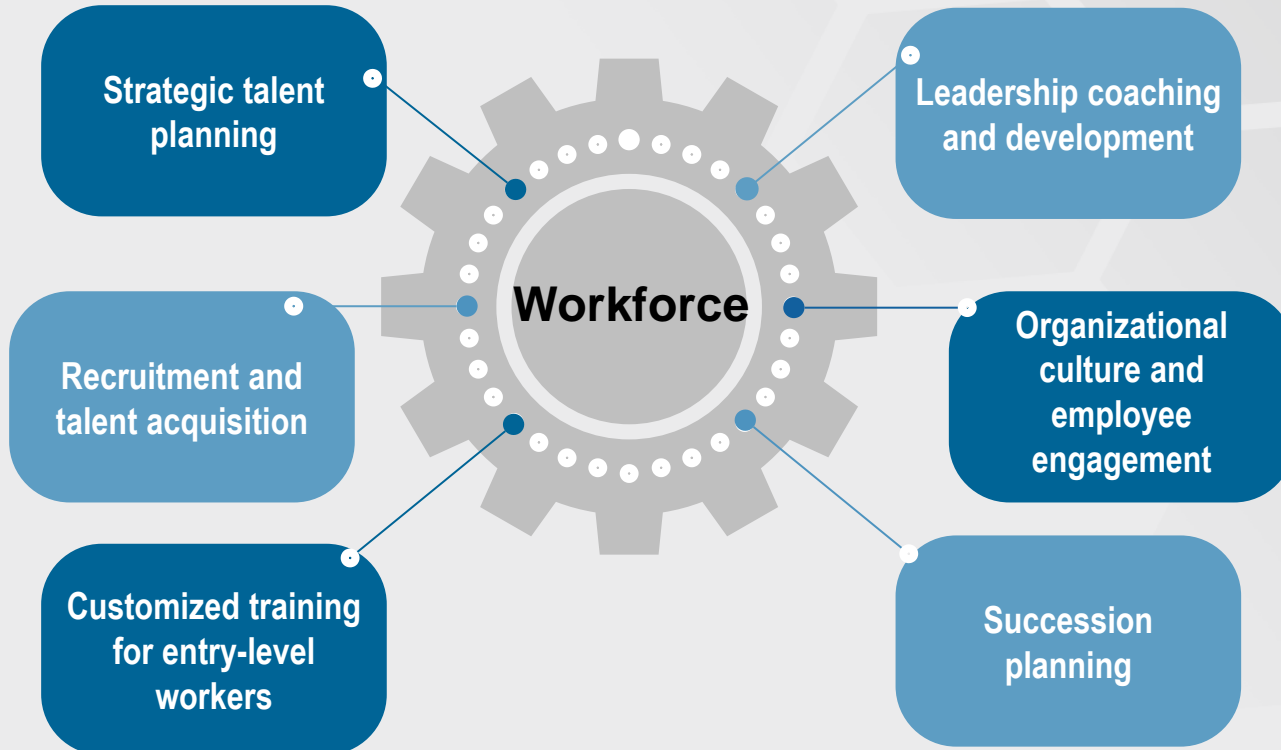
- Upskilling
- Use of technology and productivity enhancements
- Partnerships (e.g., connect educational entities to manufacturing needs and jobs/careers)
- Improving work conditions, job quality, career paths, etc.
- Assessing underserved populations and integrating them into the manufacturing industry
- Making the case for integration of underserved populations with SMMs

Build a pipeline of future employees for the manufacturing sector through:

- Rebranding the public image of manufacturing nationally and in the states
- Broadening partnerships and connections with educational and others working in this space



MEPNN helps SMMs with an extensive range of workforce needs that address all stages of the employee lifecycle including:





Building Domestic Workforce Capacity

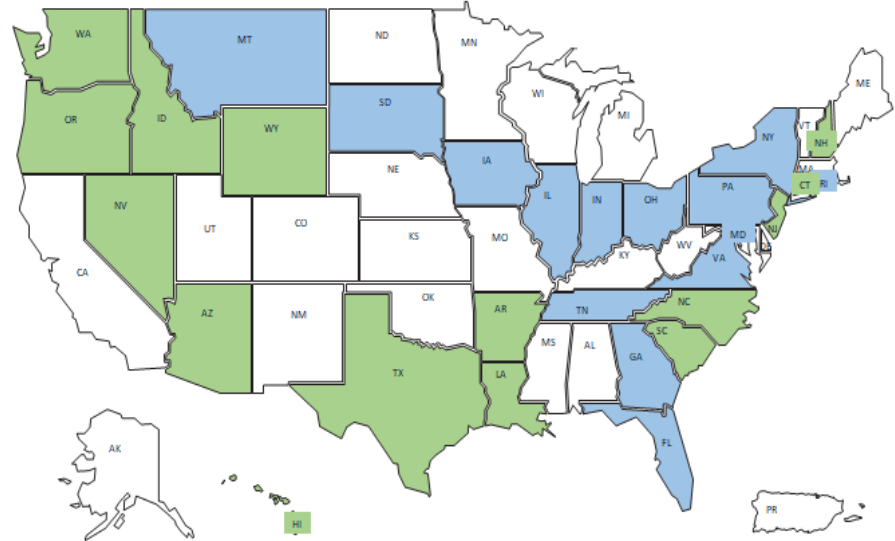
Strong focus on underserved communities and manufacturers work environment welcoming culture (MEP - Baldrige Collaboration)

Community

Centers Providing Services

Young professionals	37
Career-tech Students	36
Women	35
Veterans	34
High School Students	33
Community college students	31
Four-year college students	31
Displaced workers	24
Re-entry	21
New Americans / Recent immigrants	19
Middle School Students	15
Opportunity Youth (ages 16-24, not in school)	12
Special needs	12

MEP Centers Baldrige Job Quality Tool Kit downloads and Assessments Users (Blue). Provided by America Works





Mitigating Supply Chain Vulnerabilities

Increase supply chain visibility

- End-to-end awareness (supplier's supplier and customer's customer)
- Mapping supply chains (key industries, in individual states)
- Working with original equipment manufacturers to map out how SMMs fit into their supply chains

Assess supply chain risk

- Able to identify vulnerabilities
- Able to rapidly detect risk as they emerge
- Strengthen supplier development Increase supplier scouting capacity



NIST MEP: National Network Support for Supplier Scouting



NIST MEP Prepares Report

Prepares scouting results report and will request submitter to follow-up with NIST MEP.



Aggregate Results

NIST MEP will gather, analyze and aggregate MEP Center submissions.



Supply Chain Need Identified

MEP Supplier Scouting Opportunity Synopsis is created with assistance from NIST MEP.



NIST MEP Distributes

MEP Centers conduct a nationwide search for U.S. manufacturers.



MEP Supply Chain Capabilities

- Invested over \$20 million in MEP National Network to:
 - Expand existing MEP Centers capacity to provide services focused on national supply chain optimization
 - Establish a National Supply Chain Intelligence Network that will:
 - Comprehensively support supplier scouting services
 - Rigorously assess and analyze domestic manufacturing capabilities
 - Expand the inherent knowledge of each MEP Center's local manufacturing ecosystems
 - Build an integrated knowledge of U.S. supply networks
 - Work with OEMs to identify U.S. small and medium suppliers



Leveraging Technology

Increasing technology adoption

- ID early adopters and leverage success to motivate the next wave of manufacturers
- Define tech capabilities and business cases for adoption for customers to increase impact
- Educate Center staff on the different kinds of technology to increase impact with customers

Ensuring wholistic, comprehensive application and use of technology

- Create of road maps for customers and aligning them to customer's strategic goals

Strengthening cybersecurity capabilities

- Communicate the importance of mitigating cybersecurity risks
- Ensure MEP Centers are adhering to cybersecurity guidance provided by NIST MEP program

Partner with federal labs to accelerate the use of new technologies

- Co-develop tech capabilities and business cases for adoption to bring new insights to industry ¹⁹



Nine Technologies Transforming Industrial Production



The Industrial Internet
of Things



Cloud Computing



Cybersecurity



Automation



Robotics/
Cobots



Additive
Manufacturing



Augmented Reality
AR/VR



Simulation

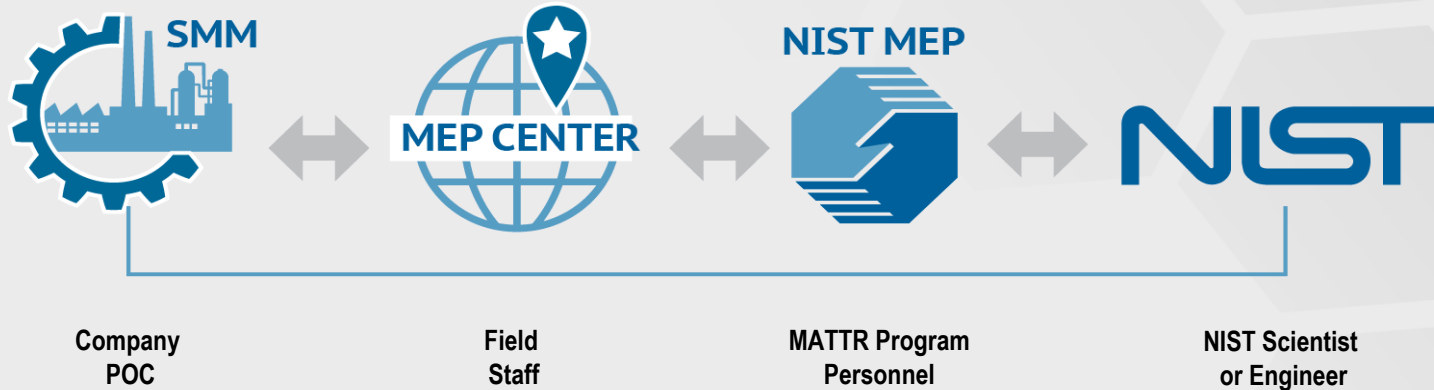


Big Data/Artificial
Intelligence AI



MATTR/MATTR+

MEP-Assisted Technology and Technical Resource Program



If a Cooperative Research and Development Agreement (CRADA) is warranted, NIST MEP may cover some or all of the costs.



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