



MEP • MANUFACTURING
EXTENSION PARTNERSHIP®



MEP ADVISORY BOARD

2018 ANNUAL REPORT



MEP Advisory Board Report for 2018

“The MEP Advisory Board remains committed to working as part of the MEP National Network™ to advise and identify the many opportunities to strengthen and empower U.S. manufacturers.”

In 2018 the MEP Program hit an important milestone, reaching thirty years of focusing on supplying U.S. manufacturers value-added access to comprehensive, proven solutions for success. Recognition of the Program’s contributions to U.S. manufacturing, as well as its promise as a National Network in support of advancing manufacturing for the future was a key theme of the year’s activities.

The MEP Advisory Board met in March, June, and September of 2018 and our members spent time advising NIST MEP leadership and working within collaborative working groups to explore and develop recommendations on essential programmatic goals. The three working groups, supported by NIST MEP staff, made significant progress within each area of focus—Executive Committee Working Group, Supply Chain Development Working Group, and Performance/Research Development Working Group. The Board also expanded its reach to the full MEP National Network (Network) with participation in a joint roundtable session with leadership from the local MEP Center boards, sharing experiences and best practices for strengthening the Network. In addition, we received updates and continued to advise NIST leadership on the progress and direction of the MEP National Network 2017-2022 Strategic Plan.

The Strategic Plan’s principal goals of “Empower Manufacturers,” “Champion Manufacturing,” “Leverage Partnerships,” and “Transform the Network” are being measured and show significant continuing progress. Through this initiative, the capabilities of the MEP Center experts facilitated the Network’s nationwide team of trusted advisors to interact with 27,707 manufacturers in Fiscal Year (FY) 2018 and helped to increase sales by over 26% compared to 2017. As advanced manufacturing becomes the norm for industry, the MEP National Network services become crucial to support the needs of our country’s defense industrial base and help U.S. manufacturers navigate the technology revolution underway. The MEP Advisory Board will remain actively engaged in moving the principal strategic goals forward through 2019.

The MEP Advisory Board remains committed to working as part of the MEP National Network to advise and identify the many opportunities to strengthen and empower U.S. manufacturers, and we are grateful to continuing to provide guidance to the MEP Program as it enters the next thirty years.



Jeffrey Wilcox, Chair
Vice President for Digital Transformation
Lockheed Martin
Bethesda, Maryland



Bernadine Hawes, Vice Chair
Senior Research Analyst
Community Marketing Concepts
Philadelphia, Pennsylvania



Jose Anaya, Dean Community Advancement
El Camino Community College
Hawthorne, California

E. LaDon Byars, President & CEO
Colonial Diversified Polymer Products, LLC
Dyersburg, Tennessee

Dr. Carolyn L. Cason, Professor Emerita
University of Texas – Arlington
Arlington, Texas

Joe Eddy, President & CEO
Executive Vice President at Justrite Safety Group and
President/CEO of Eagle Manufacturing
Wellsburg, West Virginia

Mary Isbister, President
GenMet Corporation
Mequon, Wisconsin

Patricia Moulton, President
Vermont Technical College (Vermont Tech)
Randolph Center, Vermont

Mitch Magee, Director of Global
Advanced Manufacturing Team
PPG Aerospace Business Unit
Sylmar, California

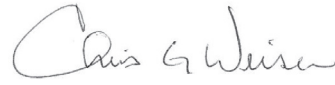
Matthew Newman, Director Business Management
Covanta
Bixby, Oklahoma

Kathay Rennels, Associate Vice President for Engagement
Colorado State University
Fort Collins, Colorado

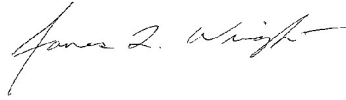
George Spottswood, CEO
Quality Filters
Robertsdale, Alabama



Leslie Taito, Senior Vice President for
Corporate Operations
Hope Global
Cumberland, Rhode Island



Chris Weiser, Owner & President
J.V. Manufacturing, Inc.
Springdale, Arkansas



Jim Wright, Vice-President of Operations
Proof Research
Columbia Falls, Montana

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About the Manufacturing Extension Partnership

The Omnibus Trade and Competitiveness Act of 1988 created the National Institute of Standards and Technology (NIST) Manufacturing Extension Partnership program (MEP) to improve the competitiveness of U.S.-based manufacturing by making manufacturing technologies, processes, and services more accessible to small and medium-sized manufacturers (SMMs). For over thirty years, NIST MEP and the MEP National Network have been focused on bridging the manufacturing productivity gap, identifying opportunities for growth, and encouraging technology deployment.

Growing from a pilot project of just three Centers to a network of organizations in every state and Puerto Rico, the MEP National Network provides its manufacturing customers with a wide array of fundamental services in manufacturing business and process improvements. Today, the Network consists of 51 MEP Centers in every state and Puerto Rico with over 1,300 experts, and approximately 400 MEP service locations. According to a third-party survey, in FY 2018, the Network interacted with more than 27,700 manufacturers.* MEP Center clients from across the country reported that the assistance they received helped to create and retain more than 122,000 manufacturing jobs in FY 2018, up significantly from nearly 101,000 in FY 2017. Clients also retained \$16.0 billion in sales, up from \$12.6 billion the previous year, and realized more than \$1.7 billion in cost savings. For every one dollar of federal investment in FY 2018, the MEP generated \$29.50 in new sales growth and \$31.00 in new client investment. This translates into \$3.8 billion in new sales. During this same time, for every \$1,065 of federal investment, MEP created or retained one manufacturing job.

**The MEP Centers and their partners, including state governments, universities, community colleges, non-profit entities, associations, and private consultants provide manufacturers with the services needed to reduce bottom-line expenses and grow top-line profits, both of which are necessary to thrive in the global marketplace.*

MEP NATIONAL NETWORK™ DELIVERS VALUE FOR MANUFACTURERS IN FY 2018

More than **122,000 Jobs** Created or Retained

**\$16.0
BILLION**
in New and
Retained Sales 

**\$4.0
BILLION** 
in Total Investment in
U.S. Manufacturing

**\$1.7
BILLION** 
in Savings



About the Manufacturing Extension Partnership Advisory Board

The statutory purpose of the Board is to provide advice and recommendations to the NIST Director on the following items:

- The activities, plans and policies of MEP
- The soundness of MEP's plans and strategies
- Current performance in relation to MEP Program plans

The MEP Advisory Board consists of members broadly representing the interests and needs of the manufacturing sector appointed by the Director of NIST. Statute requires at least two members shall sit on an Advisory Board for an MEP Center, and at least five other members shall be from U.S. small businesses representing the manufacturing sector. Additionally, the statute states at least one Board member represent a community college. The Board terms consist of a limit of two consecutive full three-year terms; Board members are ineligible for re-appointment during the one-year period following the expiration of the second term. In addition, the law requires the Board to meet at least biannually. In FY 2018, the Board met three times to perform its chartered functions.

The Advisory Board gained a new community college representative when Patricia Moulton, President of Vermont Technical College, joined the Board in June, 2018. She brought important perspectives that the Board continues to take advantage of from her personal background and extensive experience as a leader in both technical and community education as well as in economic and workforce development.

The current Board members represent the diversity of the U.S. manufacturing industry, from CEOs and executives at various sized manufacturing companies to academic leaders at both state and community college institutions of higher education. The important perspectives of these volunteers will positively impact the MEP Program into the future.



Advisory Board Members in 2018



JEFFREY WILCOX, Chair

Second Term Expires: May 2019

Jeffrey (Jeff) Wilcox is Vice President for Digital Transformation at Lockheed Martin. He oversees the Digital Transformation Office (DTO) and is responsible for the design, development, and implementation of Lockheed Martin's operations strategy. This office is charged with leveraging emerging digital technologies to transform systems design, production and sustainment, as well as ensuring the workforce and systems are in place to enable successful transformation.

Previously, Mr. Wilcox served as Vice President for Engineering and Program Operations for Lockheed Martin. In this capacity, he was responsible for the effectiveness and efficiency of the engineering, program management, production operations and sustainment functions across the enterprise. Prior to that role, Mr. Wilcox served as Vice President for Corporate Engineering where he was responsible for the engineering enterprise, ensuring that the right people, processes, tools, and technologies were in place to successfully deliver innovative engineering solutions to customers' most complex challenges. Prior to joining Lockheed Martin, Mr. Wilcox served for 17 years with Science Applications International Corporation (SAIC).

Mr. Wilcox earned his Bachelor of Science degree in biomedical engineering from Case Western Reserve University and his Master of Science degree in electrical engineering from Drexel University. He holds an honorary Doctorate of Engineering from Stevens Institute of Technology. In addition to being chairman of the Manufacturing Extension Partnership National Advisory Board, he serves on the Advanced Robotics for Manufacturing (ARM) Institute Board as well as on multiple industry and university advisory boards. Mr. Wilcox is an adjunct professor at Miami University in Oxford, Ohio, an Associate Fellow of the American Institute of Aeronautics and Astronautics, and a senior member of the Institute of Electrical and Electronics Engineers.



BERNADINE HAWES, Vice-Chair

Second Term Expires: May 2020

Bernadine Hawes is an executive-level nonprofit professional and economic development specialist working in the areas of project management, strategy development, compliance, and evaluation. Her most recent achievement has been the authorship of a best practices manual for small business and economic development, which was funded in part through a grant from the U.S. Small Business Administration to American Cities Foundation. Ms. Hawes began her career at the University City Science Center (Philadelphia) starting as a senior-level project administrator and later Vice President. Currently, she is a senior research analyst for Community Marketing Concepts. Ms. Hawes is Chairwoman of the Delaware Valley Industrial Resource Center, which is part of Pennsylvania MEP. She also serves on the Board of the PEC Community Development Corporation, which focuses on community development initiatives in Philadelphia, is Chair of the PEC Foundation, and serves on the Advisory Board of the Philadelphia Urban League Entrepreneurship Center. Born and raised in Washington, DC, Ms. Hawes has an MS Degree from the University of Pennsylvania. She is a summa cum laud graduate of Lincoln University (PA). She has been the national Co-Chair of Penn's Black Alumni Society and former member of the University of Pennsylvania's Brister Society for Diversity Inclusion.



JOSE ANAYA

First Term Expires: July 2019

Jose Anaya oversees the El Camino Community College District's Community Advancement Division and Business Training Center as the Dean. Prior to joining the staff at El Camino College, he directed economic development programs at Cerritos College. Under Mr. Anaya's guidance, Cerritos College received numerous honors and recognition related to workforce development. These included a Best Practices award for its partnership with Lockheed Martin, and selection by the Corporation for a Skilled Workforce and its partners as one of five national exemplary models for expanding postsecondary education and training opportunities for Hispanic workers. Mr. Anaya's earlier experiences include work in the private sector with corporations such as Honeywell, ITT Industries, and DataCard. He has broad experience and expertise in the areas of product design, manufacturing and management, as well as economic and workforce development. Mr. Anaya has a B.S. degree in mechanical engineering from California Polytechnics University, Pomona, and an MBA with an emphasis in entrepreneurship from the University of Southern California.



E. LADON BYARS

First Term Expires: February 2020

LaDon Byars is the President and CEO of Colonial Diversified Polymer Products, LLC of Dyersburg, Tennessee. Colonial Diversified produces high-quality rubber products for a wide variety of industries including automotive, defense, commercial building, construction, farm equipment, aerospace, computers, medical, telecommunications, recreation, health, entertainment, plumbing, refrigeration, and many more. She started out as a financial analyst and rose to become the President of the company. Ms. Byars is very active in the manufacturing community, has received many awards, and is on the Advisory Board of the University of Tennessee Center for Industrial Services, which houses Tennessee MEP, the MEP Center in Tennessee.



CAROLYN CASON

Second Term Expires: May 2020

Carolyn L. Cason, Professor Emerita at The University of Texas at Arlington, has had a distinguished career as a scientist, teacher, academic leader, and innovator. She began her professional career as a critical care nurse and has held university teaching appointments for over 35 years. She joined the University of Texas at Arlington in 1997 as Professor and Associate Dean for Research in the College of Nursing and served as the university's Vice President for Research from 2010 to June 2015. She envisioned and built the nation's first comprehensive healthcare simulation research and development center, the Smart Hospital, creating the prototype for the nation. She led the efforts that created Smart Care (a living laboratory dedicated to developing non-invasive, pervasive technology to monitor health changes and support independent living) and the Shimadzu Institute for Research Technologies (a \$25M core facility supporting chemistry, biology, nanotechnology, and material science research). In 2014, she was named a Charter Fellow, National Academy of Inventors and in October 2015, she was inducted as Fellow, American Academy of Nursing. She serves on a number of boards, including the board of Tech Fort Worth, a seed incubator/accelerator supporting entrepreneurs commercializing innovative technologies.



JOE EDDY

First Term Expires: March 2020

Joe Eddy is Executive Vice President at Justrite Safety Group and President/CEO of Eagle Manufacturing, both companies are leaders in the safe storage, transfer, use and disposal of flammable and hazardous liquids for over 100 years. As Executive Vice President of Justrite's North American Chemical Safety Business Unit, Mr. Eddy is responsible for both Eagle and Justrite's legacy operations groups. He is past Chairman of the West Virginia Manufacturers Association (WVMA), is President of the WVMA Educational Fund Board, Vice President of the Foundation Board at West Virginia Northern Community College, on the Advisory Board at the McDonough Center for Leadership and Business at Marietta College, Vice President of the Regional Economic Development Partnership Board, on the Federal Reserve Bank of Richmond's Charleston Industry Roundtable, on the Board of the National Association of Manufacturers, on the West Virginia Economic Development Authority Board and founded the Joseph and Debra Eddy Foundation, as well as the Joseph Eddy Technology Fund at West Virginia Northern Community College.



MARY ISBISTER

First Term Expires: [March 2020](#)

Mary Isbister is President of GenMet Corporation, a custom metal fabricating company located in Mequon, Wisconsin. After graduating with a Bachelor of Science degree in chemistry, she worked at Pfizer, in Groton, CT for 11 years. During her tenure at Pfizer she held positions in medicinal chemistry, clinical research, and senior organizational development. In 1997, she moved to Wisconsin and founded Synergy Solutions, an organizational development and strategic planning consulting business, which she ran until 2001. In 1999 Ms. Isbister and her husband purchased GenMet Corp., a custom manufacturer specializing in high value-added metal fabrications and enclosures. From 2010–2014 Ms. Isbister also served on the U.S. Manufacturing Council, reporting to the U.S. Secretary of Commerce.



MITCH MAGEE

First Term Expires: [March 2020](#)

Mitch Magee is the Director, Global Advanced Manufacturing Team for PPG's Aerospace business unit. He has over 30 years of manufacturing experience, having served in a number of capacities from front line plant operations to global quality and EHS roles in PPG's automotive, industrial and food and beverage package coatings business units. Mr. Magee is also actively engaged in workforce development as the past Chair of the Delaware Manufacturing Association and led the development of Delaware's first Pathways to Prosperity high school manufacturing technology program. This program was developed in conjunction with Governor Markell's administration, Delaware Technical and Community College, and local high schools. Mr. Magee has also served on the Delaware Workforce Development Board, boards of Western Pennsylvania Air and Waste Management Association, Delaware Technical Community College-Terry Campus, Central Delaware Chamber of Commerce, and as a Pickaway County (Ohio) Trustee. He is a graduate of Allegheny College (BS Liberal Arts), University of Pittsburgh (MS Chemical Engineering), and a licensed Professional Engineer.



PATRICIA MOULTON

First Term Expires: June 2021

Patricia Moulton was appointed President of Vermont Technical College by the Vermont State Colleges Board of Trustees in March 2017. Pat served as Interim President from September 2016 to March 2017. Vermont Technical College is part of the Vermont State College System and the only technical college in Vermont. Prior to joining the College, Ms. Moulton served as Secretary of the Vermont Agency of Commerce and Community Development (ACCD).

Ms. Moulton has served in a variety of appointed positions in Vermont state government, having been appointed by four different governors. She has served as Commissioner of Labor in addition to several economic development related appointments. She has also served as appointed Chair of an environmental regulatory board for the State of Vermont. Ms. Moulton spent 35 years in the practice of economic development on the local, regional, and state levels. She has worked as Executive Director of four different regional economic development corporations in Vermont. She also ran her own economic development consulting company for several years. Ms. Moulton is a graduate of the University of Vermont, with a degree in Political Science.



MATTHEW NEWMAN

First Term Expires: March 2020

Matthew (Matt) Newman is the Director of Business Management for Covanta. He joined Covanta in 2008 and has over 25 years of experience in the energy industry, which includes renewable energy, natural gas, exploration and production, electricity generation, asset optimization, risk management, and public relations. In his current position, Mr. Newman is responsible for all business matters pertaining to the financial management and public affairs initiatives of the Covanta Tulsa Renewable energy facility located in Tulsa, OK. In addition, Mr. Newman plays an integral role in advancing Covanta's corporate programs for the company's extensive fleet of Energy from Waste facilities across the United States.



KATHAY RENNELS

First Term Expires: March 2019

Kathay Rennels is the Associate Vice President for Engagement at Colorado State University (CSU) and works to advance collaborative networks across the state and create economic development opportunities. She has significant experience fostering public and private partnerships in regional and rural workforce development, with particular attention to Larimer and Weld Counties. Ms. Rennels previously served three terms as a Larimer County Commissioner and is now leading the Food and Agriculture Key Industry Network for the State of Colorado. Ms. Rennels helped initiate the “Value Chain of Colorado Agriculture” study, released in February 2013, and co-authored the November 2014 follow-up study, “The Emergence of an Innovation Cluster in the Agricultural Value Chain along Colorado’s Front Range.” She also initiated the “Advancing the Agricultural Economy through Innovation” summit, held at CSU in March 2015. Ms. Rennels was the President of Colorado Counties Inc. and named Commissioner of the year. She currently serves on the Community Foundation of Northern Colorado, El Pomar Foundation, and Manufacturer’s Edge (the Colorado MEP Center) as a Board Member.



GEORGE SPOTTSWOOD

First Term Expires: May 2020

George Spottswood is owner and CEO of Quality Filters, Inc. (QFI) in Robertsdale, Alabama. QFI was incorporated in 1981 in Gulf Shores, Alabama. Mr. Spottswood and his father, Horace Spottswood, purchased the business in 1983. At the time of purchase, QFI employed eight associates and operated out of a 10,000-square foot rented facility, manufacturing a single HVAC air filter product. Today, QFI employs 150 associates and operates out of a 70,000-square foot corporately owned facility. He has served two terms as Associate Council President of the National Air Filtration Association (NAFA) as well as served on several NAFA Committees in varying roles. Mr. Spottswood has been involved with the Alabama Technology Network (ATN), Alabama’s MEP Center since 2005. He was named 2005 ATN Business Innovator of the Year for the State of Alabama. Other corporate Awards include the 2011 Innovator of the Year Award for Alabama by the Southern Growth Policy Board.



LESLIE TAITO

First Term Expires: July 2020

Leslie Taito is currently the Senior Vice President for Corporate Operations for Hope Global, a manufacturer of products and engineering of textile solutions. She is responsible for operations improvement, M&A, product and service development and marketing strategy deployment. Ms. Taito has 25 years of management and manufacturing experience having served as the first Director of Regulatory Reform for the State of Rhode Island in the Office of Management and Budget and held the Chief Executive Officer position for Rhode Island Manufacturing Extension Services, Inc. (formerly Rhode Island MEP).



CHRIS WEISER

First Term Expires: March 2020

Chris Weiser is the owner and President of J.V. Manufacturing, Inc. Since 1978, J.V. Manufacturing has provided the best equipment solutions for America's waste and recycling needs. J.V. Manufacturing provides safe, quality products made in the USA. Known for their excellent customer service which has made Cram-A-Lot one of the most respected brands in the industry, J.V. Manufacturing has over 200 employees, two manufacturing locations, and three remote service locations. Upon graduating from the University of Arkansas, Mr. Weiser moved to Louisiana and worked for Freeport-McMoRan, a minerals and oil- and gas-producing company. In 1985, he moved back to Arkansas to help his family run J.V. Manufacturing, Inc. Since 1996, he has been President, CEO and owner of the company. Mr. Weiser is passionate about the waste and recycling industry and about service to his community.



JIM WRIGHT

First Term Expires: March 2020

Jim Wright is the Vice-President of Operations for Proof Research, located in Columbia Falls, Montana. Proof Research is an industry leader that designs and manufactures state-of-the-art carbon fiber composite firearms for both military and commercial applications. Mr. Wright has 25+ years of experience in manufacturing engineering and production management across the aerospace, automotive, semiconductor, and firearms industries. Through his professional career, he has spent a significant amount of time abroad working with European and Asian companies and brings a passion to apply best-in-class concepts and Lean Manufacturing principles to help improve manufacturing within the United States. He holds a B.S. and M.B.A. from Southern Illinois University and was a member of the Montana Manufacturing Extension Center (MMEC) advisory board for 6 years, serving in both the Vice-President and President roles. He is active in the local community and serves on the Board of Directors for the Kalispell City Chamber of Commerce.



Advisory Board Activities in 2018

The Advisory Board conducted three meetings in 2018:



- March 7, 2018
- June 13, 2018
- September 12, 2018

The first meeting in March was held in Washington, DC. This Advisory Board meeting featured a designated period for the leaders of local MEP Center Boards as well as Center Directors to meet with the Advisory Board members in a roundtable format. The roundtable meeting encouraged discussion of the Center Board leaders' experiences, challenges, and thoughts on the goals of the MEP National Network's Strategic Plan as well as on the topic of MEP Centers coming together as a unified National Network. Also, the Advisory Board was able to participate in a discussion with Eric Chewning, Deputy Assistant Secretary of Defense, Manufacturing and Industrial Base Policy (MIBP), U.S. Department of Defense (DoD). Mr. Chewning's presentation focused on Executive Order 13806, which calls for a better understanding of the risks to the nation's Defense Industrial Base and supply chain resiliency. The group talked in depth about the potential role the MEP National Network can take to address the manufacturing production challenges facing the nation.

The MEP Advisory Board subsequently met face-to-face in Arlington, Texas in June, and Kansas City, Missouri in September. These meetings included representatives from NIST, NIST MEP and MEP Centers, and provided key opportunities both inside and outside of the formal meetings for the MEP Advisory Board to increase their knowledge of the latest trends in manufacturing, advise and support the MEP Program, and actively engage with the MEP National Network.



Leveraging Partnerships:

In June, prior to the Board meeting, Advisory Board members toured both the Lockheed Martin Aeronautics facility in Ft. Worth, Texas and the University of Texas at Arlington's technical education facilities. The June meeting featured an interactive presentation from an expert on expanding the Board's engagement through advocacy as well as the latest updates from the Manufacturing USA program.

September's meeting was held in Kansas City, Missouri. Board members were able to attend the MEP National Network's Update Meeting and the Foundation for Manufacturing Excellence's (FORME) Best Practice Conference which preceded the Advisory Board meeting.

These meetings included roundtable discussions, plenary speakers, and specialized working group meetings.

At both meetings, the Board received detailed updates from the Director of MEP on the state of the MEP Program and the progress being made on the Strategic Plan. The Board members also engaged in high level discussion of various topics integral to the program and provided specific report-outs from the Board's own working groups.

"Leveraging Partnerships" is one of the principal strategic goals of the MEP National Network's 2017-2022 Strategic Plan.

The Board's commitment to go "above and beyond" through their participation in these extra activities throughout the year is of true value to the Network.





In addition to the aforementioned activities, the Board heard reports and provided input on additional important projects throughout the year, including:



The Government Accountability Office's (GAO) report on the National Network's change to the cost share through the 2017 American Innovation and Competitiveness Act legislation was written in consultation with input provided by the Advisory Board.



Updates on progress to the MEP National Network Strategic Plan for 2017-2022, NIST MEP competitive awards, embedding MEP Center staff at Manufacturing USA Institutes projects, and disaster assistance assessments for manufacturers via efforts such as the Manufacturing Disaster Assessment Program (MDAP) awards, as well as the results of an important, independent study on the MEP Program's economic impacts from the W.E. Upjohn Institute for Employment Research.

Finally, great strides were made in the time-period between each face-to-face meeting by the three new working groups created by the Board. When gathered together for full meetings, reports from each group were given, and productive discussions were held to continue to move each group forward.



Working Group Updates - 2018

Performance/Research Development Working Group Purpose:

This working group offered guidance on the MEP Program: developing and establishing a research agenda to support and enrich MEP Center evaluation (Performance & Evaluation Management System), System Learning and Network Information Services for Centers, and economic development state partnerships. The Performance/Research Development Working Group included the following MEP Advisory Board members: Leslie Taito, lead, Kathay Rennels, Jose Anaya, Carolyn Cason, Joe Eddy, Jim Wright, Jeff Wilcox and Bernadine Hawes, as well as NIST MEP staff support.

The NIST MEP Advisory Board convened a Performance and Research Development Working Group in January 2018. The working group was charged with focusing on the issue of performance measurement and management, evaluation, and research to support the MEP National Network. The working group met several times over the year and presented a draft report to the entire Board at the September meeting.

The working group identified research topics and ideas for the MEP Advisory Board to consider going forward. The working group focused on topics in three areas. The first focused on supporting NIST MEP and the National Network to improve performance. This research may help guide the transformation of the National Network and leverage partnerships. The second group of topics focused on the broader manufacturing landscape to enhance the MEP National Network as a champion and thought leader for manufacturing as a means to empower U.S. manufacturers. The final topic focused on ensuring that NIST MEP supports and builds out the infrastructure for research and evaluation efforts. The working group recognizes that, while each of these topics represents a significant undertaking, these are all key drivers in establishing a longer-term research strategy for the program.

The working group's draft report is now prepared and expected to be brought before the MEP Advisory Board for approval at the first meeting of FY 2019.



Supply Chain Development Working Group Purpose:

This working group offers guidance and perspectives on MEP Program support and development of manufacturing supply chains with an emphasis on defense suppliers in regard to Defense Industrial Base gaps and expertise on who should be brought into the discussion to provide insight on defense supplier gaps. The Supply Chain Development Working Group includes the following MEP Advisory Board members: Matt Newman, lead, LaDon Byars, Chris Weiser, Mary Isbister, Jeff Wilcox, Bernadine Hawes, as well as NIST MEP staff support.

The MEP National Network supports DoD supply chains in many areas, including cybersecurity assistance, defense industry adjustment efforts of the DoD Office of Economic Adjustment (OEA), and DoD-sponsored Manufacturing USA Institutes. These efforts to increase awareness and expand assistance to manufacturers across the country are catalyzed by the requirements of the Defense Federal Acquisition Regulation Supplement (DFARS).

MEP National Network cybersecurity assistance capabilities and capacities continue to develop, with the goal of achieving nationwide coverage in FY 2019. As of September 2018, 41 MEP Centers in the National Network are participating in the NIST MEP Cybersecurity Working Group, and 39 of the 51 MEP Centers are operating a cybersecurity practice. Regional, go-to Centers are beginning operation, as well, to help establish national cybersecurity coverage for the MEP National Network. NIST MEP continues to work closely with several DoD programs to leverage MEP Centers, helping to ensure that defense contractors implement appropriate cybersecurity protections to safeguard information in defense manufacturing supply chains. The Competitive Awards Program (CAP) Cybersecurity Project is in the process of developing “Cyber in a Box” as a tool for the National Network to provide uniform delivery of assistance to clients.

Also, 2018 saw the continuation of pilot projects to embed MEP staff at all 14 Manufacturing USA institutes. These projects continued to provide needed advanced manufacturing technology assistance to U.S. SMMs in partnership with the Manufacturing USA Institutes operating around the U.S. The participating MEP Centers are transferring technology, developing and testing business models to serve SMMs in Institute technology and market/supply chain areas, and developing expert national resources across both Programs as well as cultivating an enhanced nationwide network of partnerships.

NIST MEP and MEP Centers nationwide, with the essential support of the MEP Advisory Board, look to continue these important efforts and continue to increase the National Network’s impacts for U.S. manufacturers through the coming year.

Advisory Board Executive Committee Working Group Purpose:

This working group offered guidance on future MEP Advisory Board leadership and membership recruitment, provided insight into cultivating strong Board governance, and explored ways to expand the MEP Advisory Board's role regarding the local MEP Center Boards. The Executive Committee Working Group includes the following MEP Advisory Board members: Jeff Wilcox, lead, Bernadine Hawes, Carolyn Cason, Mitch Magee, George Spottswood, as well as NIST MEP staff support.

Resources to Empower the Board – The group discussed the importance of equipping all MEP Advisory Board members with basic orientating information on the MEP Program as well as individual Board member roles and responsibilities to help new members actively engage in activities as soon as possible. While an orientation program delivered by NIST MEP staff was previously in practice, additional resources were added to the tool box during this year. A mentoring program was initiated, allowing longer-term Board members to join the orientation call and be available for follow-up questions. Also, two new documents were created and shared with the Board this year, including a paper outlining Advisory Board member roles and responsibilities as well as a detailed glossary and acronym workbook with a plethora of terminology used throughout the MEP National Network. While specifically aimed at new members coming into service, these deliverables have proven to be helpful to even the more seasoned members.

Planning for Succession in 2019 – The working group is focused on next steps for successful MEP Advisory Board leadership succession in the second half of 2019.

The current Board Chair's term of service expires in late May 2019. After approval, a new Chair and Vice Chair will be announced at the first meeting of FY 2019 and will begin their new leadership roles in June.

MEP Advisory Board Charter Renewed Through 2022:

The MEP Advisory Board's guiding statute, along with all Federal Advisory Committees, are required to have a charter on file to allow for continuation of all Board activities. During each renewal period, extensive paperwork is channeled through NIST legal and leadership teams with final approval required by leadership at the Department of Commerce. Included in the renewal package is the updated Charter along with a "Justification for Renewal" and a "Membership Balance Plan." Prior to 2017, this renewal process was required on a bi-annual basis but switched to an annual requirement during that year. Through efforts of the current Advisory Board with NIST MEP staff, the 2018 Charter package was approved in October with the renewal period extended to four years.



MEP National Network Update

The MEP Program continued to make great strides in moving from the former model of a loose federation of independent Centers to a formalized integrated organization known as the MEP National Network, a common entity comprised of all 51 MEP Centers in all 50 states and Puerto Rico, the MEP Advisory Board, and strategic partners working side-by-side with NIST MEP.



One of the primary outcomes of this year’s diligence was the growth of the National Network’s Center Leadership Team (CLT). Growing from a handful of Center leaders (formerly known as the “Future is Now” group or FIN), this group currently has more than half of the 51 MEP Centers now participating. These representatives, along with NIST MEP staff and FORME leadership, have developed a framework outlining how Centers will work together into the future to continue to build an integrated network that can meet the evolving demands of U.S. manufacturers. At each meeting in FY 2018 the CLT updated the Board and in March presented a framework including the Vision of the National Network and Successful National Network Collaboration with proposed Success Requirements.

Vision of the National Network

“We are the go-to resource for America’s manufacturers, ensuring U.S. manufacturing is resilient and leads the world in manufacturing innovation.”



Successful National Network Collaboration and Success Requirements:

The National Network will monitor progress via key success measures on Mission Performance and the Value of the National Network.

Short Term Objectives Included the Following:



Develop a charter for the Center Leadership Team to effectively lead the National Network



Finalize the Network Communications Plan and begin to secure Network participation



Populate the Knowledge Sharing Team to collaborate with NIST MEP staff on Network strategies and objectives



Formalize, encourage, and document multi-state engagements (e.g. Cybersecurity)

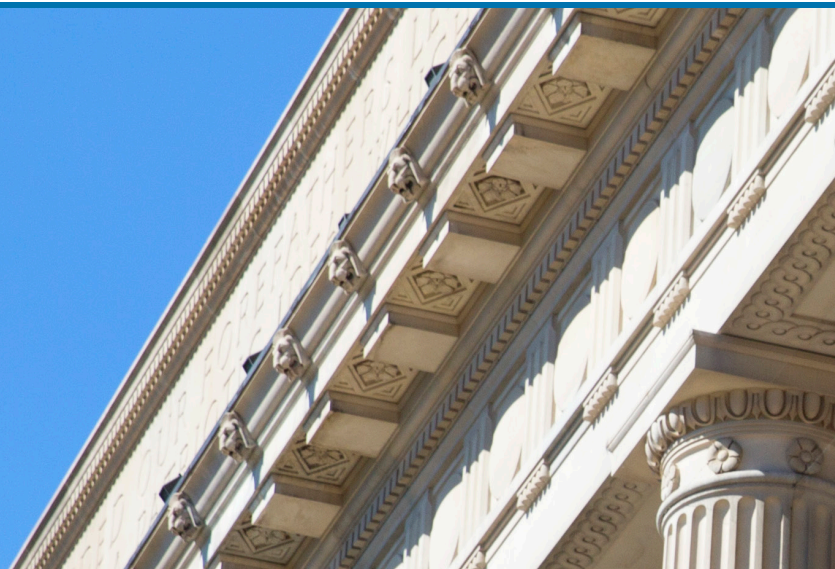


Government Accountability Office (GAO) Cost Share Report

The NIST MEP Program worked to change the cost share model from 2-to-1 to 1-to-1 for MEP Centers for over a decade to enable the Centers to work with a more diverse group of companies and offer a broader array of programs. In 2013 the MEP Advisory Board analyzed the cost share requirement and identified the problems it was causing, including difficulties in accounting, driving the system towards looking out for match rather than for service, and limiting the ability of the MEP Centers to partner with other organizations in regional activities.

A change in cost share finally came in early 2017 with the signing of P.L. 114-329, the American Innovation and Competitiveness Act (AICA). This was the third largest legislative change in the authorizing legislation of the Program as compared to the second, the America Competes Act of 2007 which formally established the MEP Advisory Board and was initiated by the Omnibus Trade and Competitiveness Act of 1988 which created the MEP Program.

The AICA required a report to Congress within two years of enactment, or by January 6, 2019 to include input from this Board on the impacts of the change in cost share. The legislation called for the General Accounting Office (GAO) under the lead of the Comptroller General and “in consultation with the MEP Advisory Board” to help the GAO analyze three outcomes from this provision of the AICA, including: the effectiveness of the changes in the cost share to Centers; the engagement in services and the characteristics of services provided by Centers, including volume and type of service; and whether the cost-sharing ratio change has had any effect on the services provided by either type of Center.



GAO first contacted NIST to begin conducting this study in May of 2018. GAO followed with interviews of MEP Center staff while NIST MEP continued to provide documentation throughout the summer. The full MEP Advisory Board engaged with the GAO during the September 2018 meeting in Kansas City, Missouri providing input into the report. In the conversation with the GAO, the Advisory Board expressed agreement that the MEP Centers consistently struggled with the older cost share model, particularly the smaller Centers with less funding.

The Board indicated that the 2-to-1 cost share forced MEP Centers to work with larger manufacturers to allow generation of sufficient revenue to ensure the Center could achieve the required match. The Board noted to GAO that part of the goal of the MEP Centers is to work with SMMs to become competitive, improve their performance, and achieve growth from small to larger manufacturing operations. Since smaller firms have a limited means to pay the cost, the Board told GAO the old cost share model limited Centers' ability to assist these small firms despite being the companies that most desperately needed the services.

The Board stated the intent of the Program has always been to work with small manufacturers and expressed their collective belief the AICA would show positive results for the Program. The Board looks forward to the final GAO report's findings.





1988-2018: The MEP Program Turns 30

On August 23, 1988, President Ronald Reagan signed the Omnibus Trade and Competitiveness Act (P.L. 100-418) to create the foundation of what would become the NIST MEP program.

Over the years, MEP's network of Centers and selection of service offerings has evolved to address the challenges of SMMs, who make up 99% of U.S. manufacturers. Since 1988, MEP has worked with 94,033 manufacturers, leading to \$111.3 billion in sales and \$18.8 billion in cost savings and helping its clients create and retain 985,317 jobs, based on data collected since 1998.

Recognition and educational events were held around the NIST campus in November and December of 2018. In late November, NIST MEP held an MEP National Network 30th Anniversary Recognition Commemoration at the National Academy of Sciences Building in Washington, DC. The event memorialized thirty years of MEP achievements and featured remarks and discussion among leaders from NIST, MEP Centers and their clients SMMs, as well as industry and important stakeholders focusing on the critical role the MEP Program has played in advancing U.S. manufacturing over three decades.

The event also included three videos featuring MEP Center manufacturing clients, who told their story as part of the [Heroes of American Manufacturing video series](#).

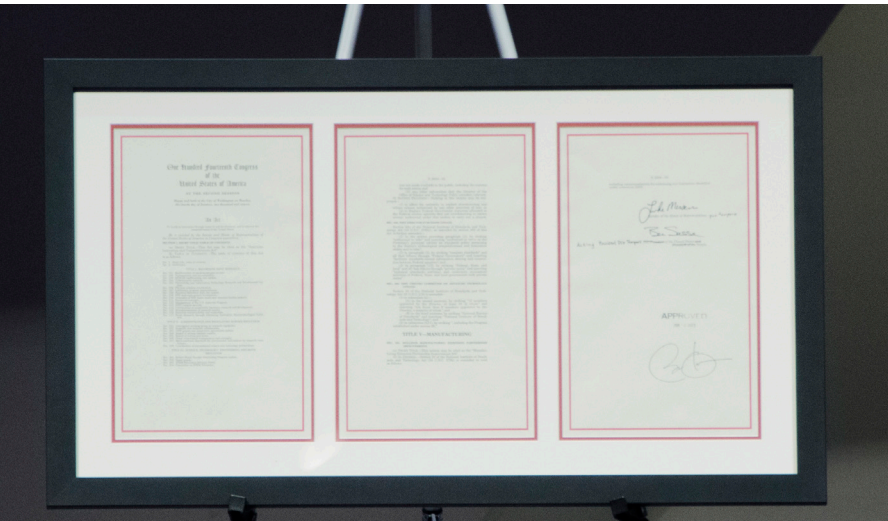
More than 200 people, representing MEP's past, present and future, attended these various events hosted by NIST MEP.





Anniversary Recognition

MEP National Network 30th Anniversary Recognition Commemoration speakers, including (counter-clockwise from top left): Dr. Phillip Singerman, Associate Director, Innovation & Industry Services, NIST; Carroll Thomas, Director, MEP, NIST; Ben Vickery, Group Manager, Marketing & Communications, MEP, NIST.



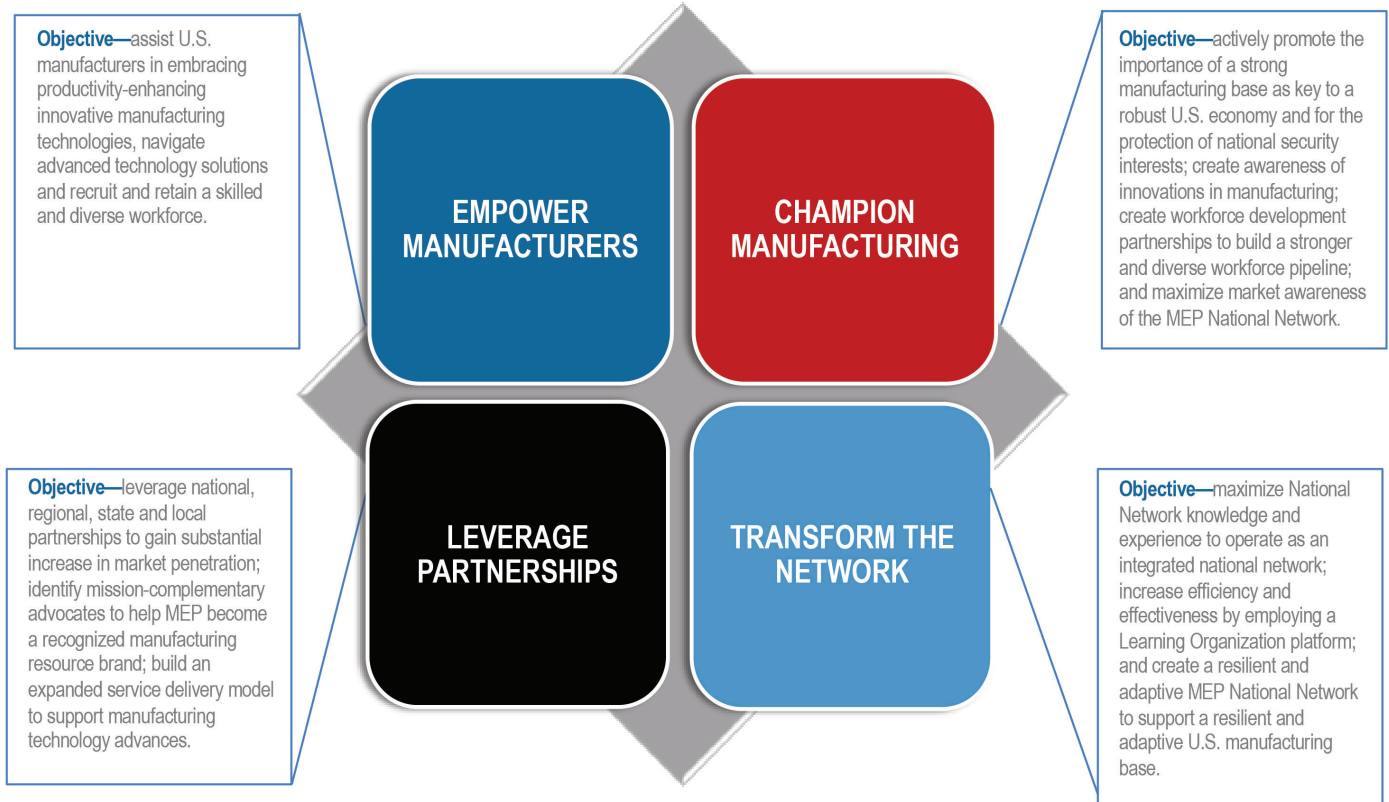
Framed copy of the MEP governing statute "American Innovation and Competitiveness Act"



MEP National Network 2017-2022 Strategic Plan

The Advisory Board continued to review and discuss the progress made on the MEP National Strategic Plan as it guides the Network forward from 2017-2022. Developed in conjunction with the Board, Center representatives, and NIST MEP staff, the plan creates a sharp focus for the Network with four expansive goals supporting the important mission and vision of the Program. The full plan can be downloaded from the [NIST MEP website](#). At each meeting, the Board was provided with updates, including detailed Network priorities along with measurable results outlining continuing progress. This information is available in the Board meeting minutes posted on the [NIST MEP website](#).

The strategic plan's four principal goals include:



MEP NATIONAL NETWORK MEASURES OF SUCCESS

18-MONTH MEASURES OF SUCCESS:

- Piloted integrated MEP National Network approach to delivery system engaging **50%** of Centers in multi-center delivery projects.
- Increased small/rural engagements through 3rd party partnerships by **10%** and increased longer-term impactful projects with these smaller firms by **5%**.
- Attained Operational Excellence in **25%** of Centers' operations and in **50%** of NIST MEP administrative support.
- Increased awareness of the MEP National Network brand by **10%** over base brand recognition measurement a year after the Network launches the brand.

FIVE-YEAR VIVID DESCRIPTION:

As the go-to resource for U.S. manufacturers...

- Recognized by small and medium-sized manufacturers as a valuable and essential resource for delivering advanced technology solutions and cited by key manufacturing stakeholders (local, state, federal) as integral to growing U.S. manufacturing ecosystems.
- We have increased our market penetration as an integrated national network by **20%**.
- We deliver integrated digitalization and cybersecurity assistance to dispersed supply chains and we have embraced Industry 4.0 in our own operational excellence.

SIGNIFICANT LONG-TERM GOAL:

The MEP National Network is known and recognized by U.S. manufacturers and stakeholders as an indispensable resource whose trusted experts help them grow and embrace manufacturing technology advances. A doubling of federal and state funding in the Network along with a strategic expansion of the current members of the MEP National Network:

- **Known and recognized** by U.S. manufacturers as the go-to resource for manufacturing.
- We've **tripled** the number of manufacturers served annually.
- We've increased the MEP National Network impact numbers **four-fold**.

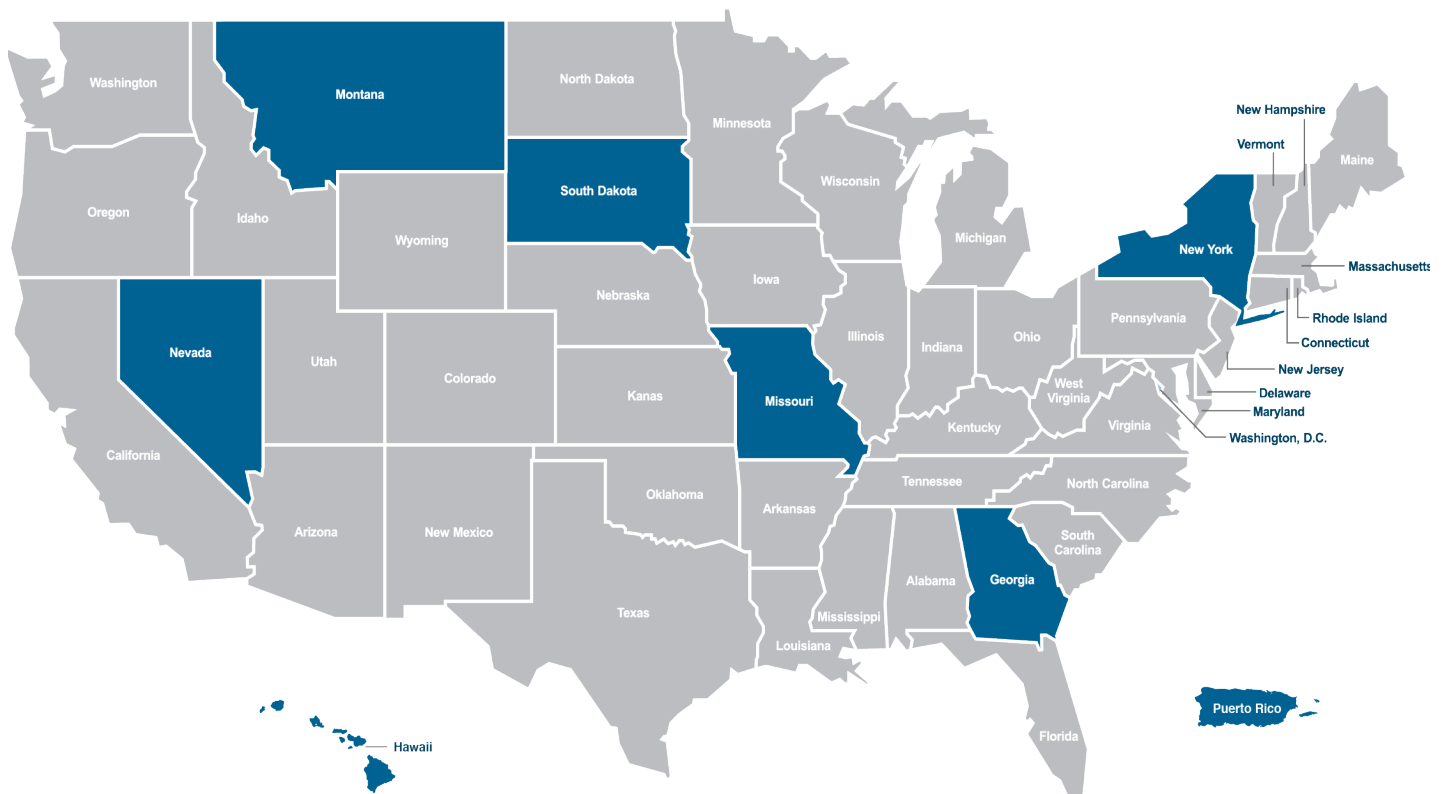


NIST MEP Competitive Awards

NIST MEP Competitive Awards Program

As part of NIST MEP's ongoing efforts to make the Program more effective and efficient, in 2017 NIST MEP launched the performance-based Competitive Awards Program (CAP). The format of using an open solicitation award throughout the fiscal year is based on an existing NIST Measurement Science and Engineering solicitation used by the Laboratory Organizational Units (OUs) in their grants programs. The MEP CAP awards are performance-based and open to MEP Centers that meet an acceptable level in seven out of ten Improving Manufacturing Productivity and Competitiveness Tracker (IMPACT) metrics.

In 2018 eight CAP awards were made via NIST and NIST MEP's authority totaling approximately \$7.04 million. These awards are intended to add capabilities to the MEP Program, including the development of projects to solve new or emerging manufacturing problems that are not already provided for under a Center's base MEP award.



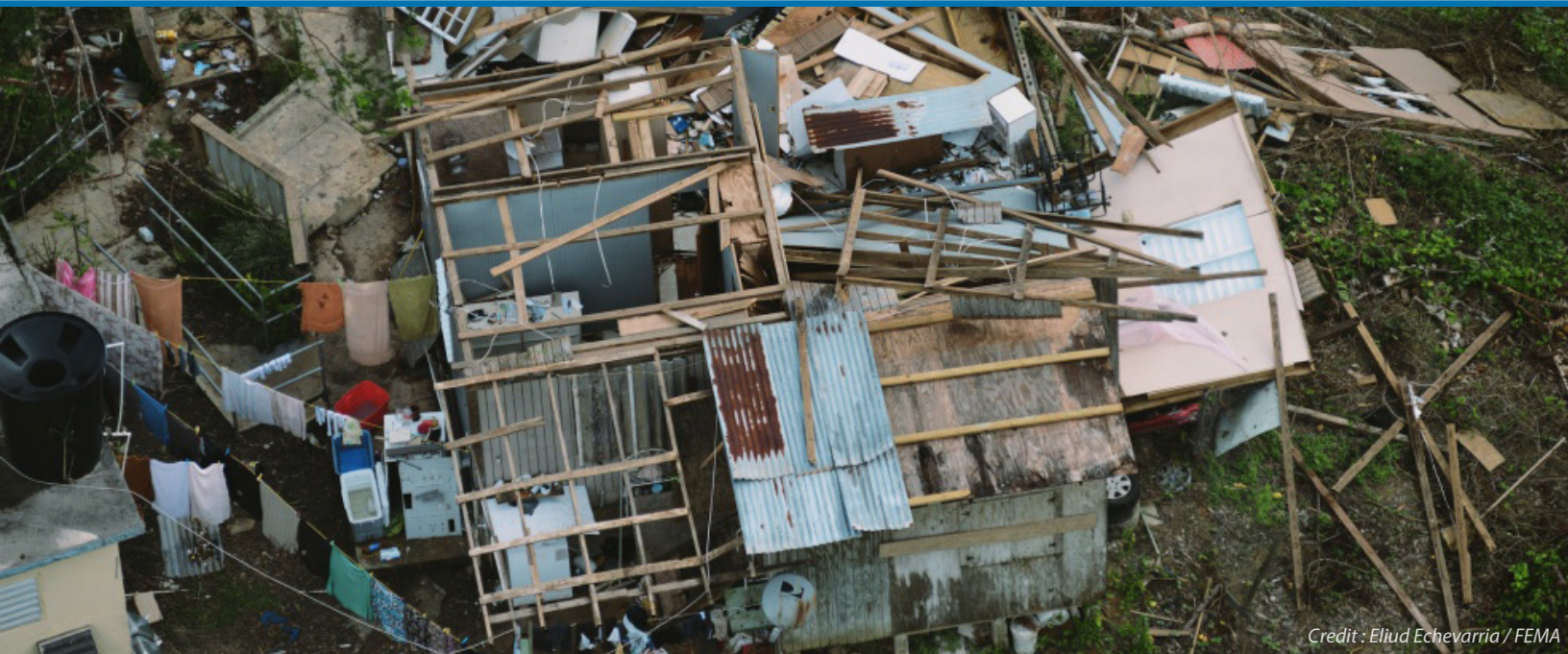
The opportunity to compete for each of these eight awards was issued as part of the NIST MEP Notice of Funding Opportunities (NOFOs). They were awarded to the following MEP Centers in seven states, plus Puerto Rico:



- **Georgia:** Georgia Manufacturing Extension Partnership (GaMEP), Atlanta
- **Hawaii:** Innovate Hawaii, Honolulu
- **Missouri:** Missouri Enterprise, Rolla
- **Montana:** Montana Manufacturing Extension Center (MMEC), Bozeman
- **Nevada:** Nevada Industry Excellence (NVIE), Reno
- **New York:** New York Manufacturing Extension Partnership (NY MEP), Albany
- **Puerto Rico:** Puerto Rico Manufacturing Extension (PRiMEX), Hato Rey
- **South Dakota:** South Dakota Manufacturing and Technology Solutions, Sioux Falls

Manufacturing Disaster Assessment Program Awards:

Throughout 2018, MEP Centers in hurricane impacted areas continued providing assessment support by way of five Manufacturing Disaster Assessment Program (MDAP) awards. Awarded between September 2017 and January 2018, these awards delivered \$6.2 million in funding to MEP Centers in Florida, Georgia, Louisiana, Puerto Rico and Texas. By the end of 2018, more than 800 total assessments had been conducted in Puerto Rico alone. Lessons learned about the support needed for manufacturers following these hurricanes will be brought to bear on disaster assistance efforts going forward.



Credit : Eliud Echevarria / FEMA



Research Report on Credentialing in the Manufacturing Industry

In July, a research report entitled “Examining the Quality, Market Value, and Effectiveness of Manufacturing Credentials in the United States” was released. NIST MEP, in coordination with NIST Standards Coordination Office (SCO), funded Workcred, an American National Standards Institute (ANSI) affiliate, to study how U.S. manufacturers use and value manufacturing credentials. The purpose of the report is to help strengthen the quality, value, and effectiveness of manufacturing credentials in the U.S. The report features recommendations for multiple stakeholders including manufacturers, credentialing organizations, educators, accreditors, and policymakers.

The report provides recommendations for credentialing and workforce stakeholders in the following areas:

- Improving understanding about the content, use, and value of credentials
- Expanding the use of quality standards for credentials
- Strengthening relationships between employers, education and training providers, and credentialing organizations
- Adding an employability skills component to existing and new credentials
- Creating credentials that focus on performance and address new roles
- Increasing the number of apprentices and expanding apprenticeships to more occupations

[Additional information as well as the full report can be viewed on the NIST MEP website.](#)

**Examining the
Quality, Market Value,
and Effectiveness of
Manufacturing
Credentials in the
United States**



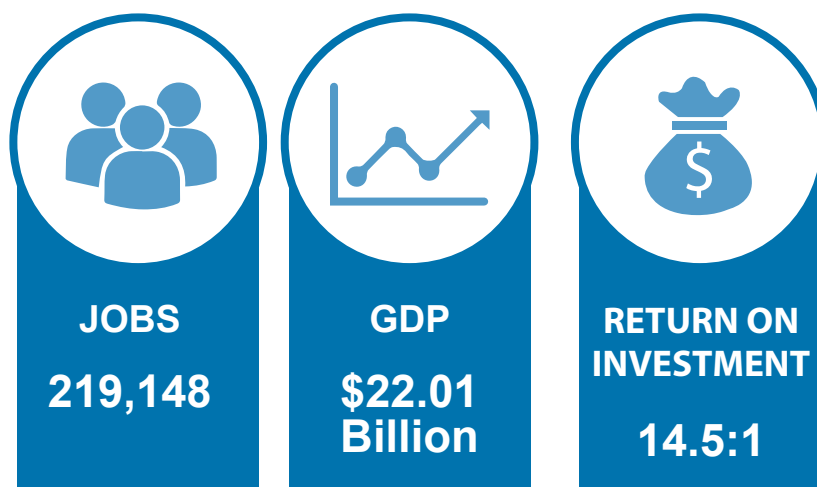
**A new research report by Workcred and NIST MEP
AVAILABLE NOW FOR DOWNLOAD**

The Upjohn Institute Report Shows MEP's Substantial Return on Investment

In April of 2018 the W.E. Upjohn Institute released an updated study which found the MEP Program generated a substantial economic and financial return of nearly 14.5:1 for the \$128 million invested in FY 2017 by the federal government.

The study also found that total employment in the U.S. was over 219,000 higher because of MEP Center projects than without the program. The Upjohn study also examined additional areas of economic impact not previously reported by the MEP Program:

- Personal income is **\$13.76 billion** higher
- GDP is **\$22.01 billion** larger, translating into an increase of **\$1.86 billion** in personal income tax revenue to the federal government than without the program.



NIST MEP Budget

The FY 2018 appropriation for the MEP program was \$140 million, \$12 million more than the MEP Program's FY 2017 appropriation. The president's FY 2019 budget request for MEP released on February 12, 2018 eliminated federal funding for the Program and provided no funding to wind down operations.

Approximately \$121 million of MEP's funding goes directly to the MEP Centers. Additional funds are provided in direct support of the MEP National Network's work with manufacturing firms, such as federal funding opportunities for Centers or contracts to train MEP Center staff.



Looking Towards the Future with a New Mission and Vision

The MEP Advisory Board is confident the changes continuing to be implemented through the MEP National Network will result in increased effectiveness of the MEP Program and bring even more impact to the Network's mission and future vision, as stated in the MEP National Network Strategic Plan.



MISSION:

Strengthen and empower U.S. manufacturers.



VISION:

We are the go-to resource for America's manufacturers ensuring U.S. manufacturing is resilient and leads the world in manufacturing innovation.



DRIVING FORCE:

We are driven to attain and uphold U.S. manufacturing preeminence which is essential to our nation's long-term economic strength and to protect our national security interests.



ROLE:

The MEP National Network focuses its expertise and knowledge as well as that of its partners (industry, educational institutions, state governments, NIST and other federal research laboratories and agencies) on providing U.S. manufacturers with information and tools they need to improve productivity, assure consistent quality, accelerate the transfer of manufacturing technology and infuse innovation into production processes and new products.





Enhancing the productivity and technological performance of U.S. manufacturing.