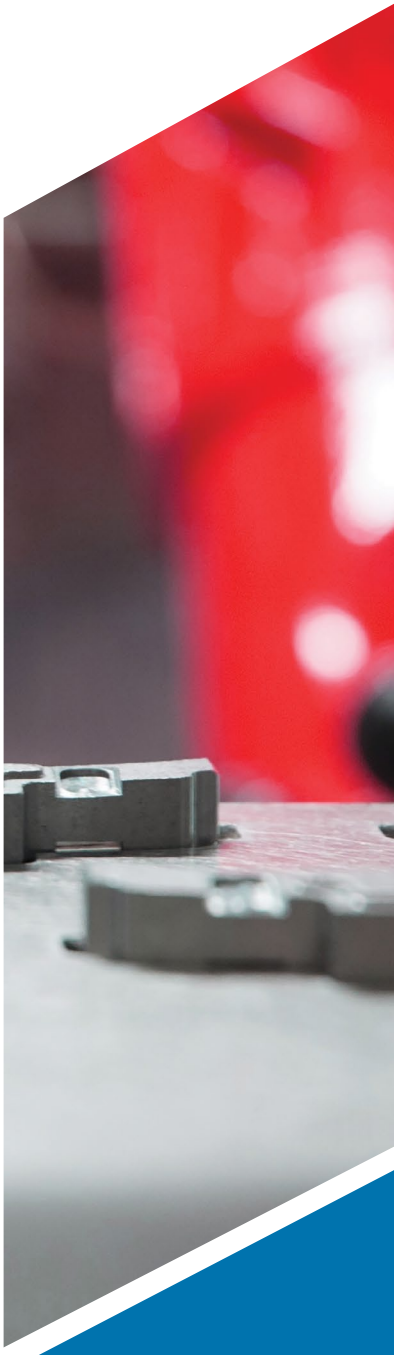
MEP • MANUFACTURING
EXTENSION PARTNERSHIP®

ANNUAL REPORT



2019

Letter from the Director

This year, we saw a lot of hard work come together and I am proud to say that the MEP National Network™ increasingly began functioning as a network made up of the 51 MEP Centers, MEP Center Board members, the MEP Advisory Board, the Foundation for Manufacturing Excellence and the American Small Manufacturers Coalition as well as NIST MEP. The Network now leverages the strengths and capabilities of each Center to support and advance U.S. manufacturing across each state and Puerto Rico. I am so pleased with the progress made toward the goals of our 2017-2022 Strategic Plan. In addition to efforts to further integrate the MEP National Network, we saw steady progress on our key measures of success on efficiency in small/rural engagements, Center and program office operational excellence and increased visibility of MEP National Network brand awareness.

A high point for 2019 was the MEP National Network Summit held in Atlanta. The Summit was an incredible display of the Network's expertise and passion for manufacturing as over 600 attendees shared challenges, ideas and resources. At the beginning of the Summit, the MEP Advisory Board was honored to host a manufacturing roundtable with Deputy Secretary of Commerce Karen Dunn Kelley and Under Secretary of Commerce for Standards and Technology and NIST Director Dr. Walter Copan. It was a unique and outstanding opportunity to discuss both the challenges manufacturers face and the resulting opportunities for impact by our Network.

The MEP Advisory Board continues to offer strategic leadership to keep us moving forward and important advocacy to support the MEP mission. This year I had the great pleasure of visiting Advisory Board members, touring their impressive operations and meeting their clients. I learned so much and am amazed at the experience and passion each of these individuals has for manufacturing and generously shares with our Network.

We made a great deal of progress in 2019 increasing services in key areas including development of MEP National Network cybersecurity assistance capabilities. We were also excited to fund eight new projects as part of our Competitive Awards Program (CAP). These awards will support projects that will expand our manufacturing service capabilities offered by MEP Centers in diverse areas including cybersecurity, workforce development and kata to food manufacturing and advanced manufacturing technology services/Industry 4.0. We are also extremely excited about the memorandum of understanding (MOU) that was executed this year between NIST MEP and the U.S. Food and Drug Administration (FDA) to establish collaborative efforts to support the U.S. food manufacturing sector and advance and improve safe food manufacturing practices in the U.S.

A report from W.E. Upjohn Institute supporting the MEP program's return on investment released in May 2019 found that the MEP program generated a substantial economic and financial return of nearly 14.4:1 for the $140 million invested in the program in fiscal year (FY) 2018 by the federal government. In FY 2019, MEP Center clients nationwide reported that the assistance they received helped to create or retain 114,650 manufacturing jobs, generated $15.7 billion in new and retained sales and realized $1.5 billion in cost savings. This is an achievement of which we can be truly proud! While a great deal of work remains, we're looking forward to working together to help the Network achieve new goals. As we shift more towards operating as a National Network, we are better able to assist a resilient and adaptive industrial base as we truly become the "go-to experts" for advancing U.S. manufacturing!

Sincerely,

Carroll Thomas, MEP Director

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About the MEP National Network

Since 1988, the Hollings Manufacturing Extension Partnership (MEP) has worked to strengthen and empower U.S. manufacturing. The MEP program was created in 1988 by the Omnibus Trade and Competitiveness Act 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) with Centers in every state and Puerto Rico. The MEP Centers provide expertise to help manufacturers reduce costs, create new products, develop the next generation workforce, find new markets and achieve business success.

For over thirty years, the MEP program has focused on bridging the manufacturing productivity gap, identifying opportunities for growth and encouraging technology deployment. Today, the 51 MEP Centers have more than 1,400 trusted advisors and experts at approximately 375 MEP service locations. The MEP Centers and their partners, including state governments, universities, community colleges, nonprofit 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.

Our Mission: *To strengthen and empower U.S. manufacturers*

Mission and Vision

MISSION:

Strengthen and empower U.S. manufacturers.

VISION:

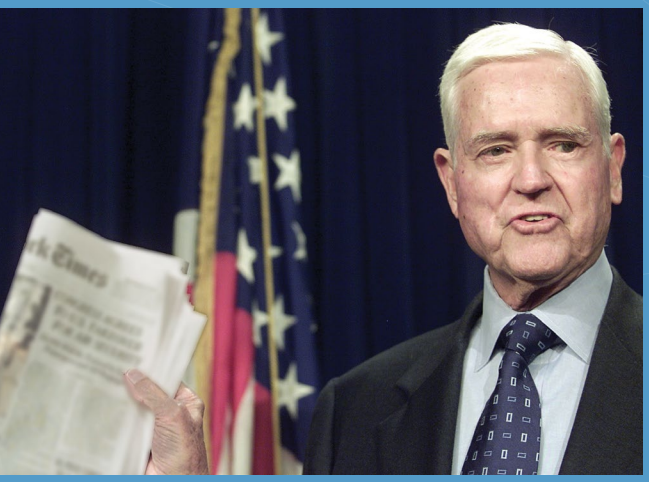
We are the go-to resource for America's manufacturers ensuring U.S. manufacturing is resilient and leads the world in manufacturing innovation.

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.



On April 6, 2019, Sen. Ernest "Fritz" Hollings (D-SC), one of the primary architects of the MEP program, passed away at the age of 97. Sen. Hollings represented South Carolina in the U.S. Senate for 39 years. He was a strong supporter of issues relating to technological innovation and how it could contribute to the overall competitiveness of U.S. industry. He was the driving force behind the Technology Competitiveness Act, which was rolled into the Omnibus Trade and Competitiveness Act, that cleared the way for the launch of the MEP program. South Carolina was home to one of the three original MEP Centers, the Southeast Manufacturing Technology Center which opened in 1989. In 2004, to honor Sen. Hollings, the MEP program was renamed the Hollings Manufacturing Extension Partnership. In November 2018, Sen. Hollings helped recognize and celebrate the 30th Anniversary of the MEP program with a letter of commendation honoring the 30 years of achievement of the MEP program. NIST MEP will continue to honor Sen. Hollings' memory through our work to support manufacturing communities across the country.

MEP Program Budget and Impacts

Fiscal Year 2019 Budget and Impact Statement

The FY 2019 appropriation for the MEP program was $140 million, which was the same as MEP's FY 2018 funding amount. The President's FY 2020 budget request for MEP which was released on March 11, 2019 eliminated federal funding for the program and provided no funding to wind down operations. However, Congress jointly approved an FY 2020 appropriation of $146 million for MEP, which the President signed on Dec. 20, 2019. Of this, $126.7 million will go directly to MEP Centers in FY 2020.

Approximately $121 million of MEP's funding went directly to the MEP Centers in FY 2019. Additional funds were 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.

Fiscal Year 2019 Impact Statement

For every dollar of federal investment in FY 2019, the MEP Centers as part of the MEP National Network generated $33.80 in new sales growth and $32.20 in new client investment. This translates into $4.7 billion in new sales. During this same time, for every $1,221 of federal investment, the MEP Centers' work with their clients created or retained one manufacturing job.

According to a third-party survey, in FY 2019, the network of MEP Centers interacted with more than 28,200 manufacturers. MEP Center clients from across the country reported that the assistance they received helped to create or retain 114,650 manufacturing jobs in FY 2019. MEP Center clients had $15.7 billion in new and retained sales in FY 2019 and realized $1.5 billion in cost savings.

Since 1988, MEP has worked with 111,343 manufacturers, leading to $132 billion in new sales and $22 billion in cost savings, and it has helped create and retain more than 1,221,996 jobs.

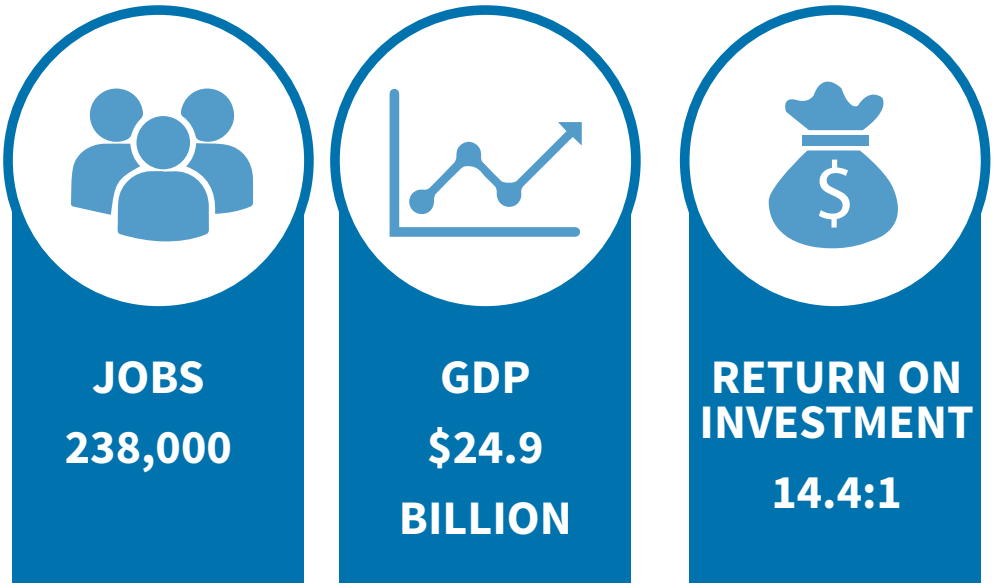
W.E. Upjohn Institute Report

In May 2019 the W.E. Upjohn Institute released an updated study which found the MEP program generated a substantial economic and financial return of nearly 14.4:1 for the $140 million invested in the program in FY 2018 by the federal government.

The study also found that total employment in the U.S. was over 238,000 higher because of MEP Center projects than without the program. The Upjohn study examined additional areas of economic impact not previously reported by the MEP program:

- Personal income is $15 billion higher.
- GDP is $24.9 billion larger, translating into an increase of $2.02 billion in personal income tax revenue to the federal government than without the MEP program.

The W.E. Upjohn Institute report is available online.



About the W.E. Upjohn Institute

The W.E. Upjohn Institute is a private, nonprofit, nonpartisan, independent research organization devoted to investigating the causes and effects of unemployment, to identifying feasible methods of insuring against unemployment and to devising ways and means of alleviating the distress and hardship caused by unemployment.

Advisory Board

About the MEP Advisory Board

The statute for the MEP program includes a requirement that an advisory committee primarily representing U.S. manufacturers provide advice to the NIST Director in a formal Federal Advisory Committee Act (FACA) body. 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 NIST Director. By statute, at least two members must be on an advisory board for an MEP Center and at least five other members must be from small U.S. businesses representing the manufacturing sector. The statute also requires that at least one Board member represent a community college. Board members are limited to two consecutive full three-year terms and Board members are ineligible for reappointment during the year following the expiration of the second term. In addition, the law requires the Board to meet at least twice per year. In FY 2019, the Board met three times to perform its chartered functions.

A number of changes were made to Board membership in 2019:

- Board chair Jeffrey Wilcox finished his second term in May 2019 and a new chair and vice chair were designated.
- Former vice chair Bernadine Hawes stepped into the role as chair.
- Matthew Newman accepted the nomination for vice chair.
- The three members leaving the Board in 2019, including immediate past chair Jeffrey Wilcox, Carolyn Cason and Joe Eddy, offered leadership and advice over their years of service and their time and commitment to the MEP Advisory Board is appreciated.
- Three new members joined the Board in 2019, including Don Bockoven, Kevin Heller and Dr. Willie E. May, bringing the roster to 15 members going into FY 2020.

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.

Members

BERNADINE HAWES, 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 in Philadelphia, starting as a senior-level project administrator and later becoming 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, D.C., Ms. Hawes has a Master of Science from the University of Pennsylvania. She is a summa cum laude graduate of Lincoln University in Pennsylvania. She has been the national co-chair of Penn's Black Alumni Society and is a former member of the University of Pennsylvania's James Brister Society for Diversity Inclusion.

MATTHEW NEWMAN, VICE CHAIR

Second Term Expires: March 2023

Matthew Newman is the director of sustainability advocacy and development for ONEOK, Inc. He joined ONEOK in 2019 and has over 25 years of experience in the energy industry which includes sustainability initiatives, business development, asset optimization, logistics optimization, electricity generation, renewable energy, fossil fuels, government, media and community relations, financial derivatives and hedging. ONEOK, a Fortune 500 Company, is one of the nation's largest midstream energy companies focused on gathering, processing, storage and transportation of natural gas and natural gas liquids in the United States.

JOSE ANAYA

Second Term Expires: July 2022

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 Bachelor of Science in mechanical engineering from California State Polytechnic University, Pomona and a Master of Business Administration with an emphasis in entrepreneurship from the University of Southern California.

DONALD BOCKOVEN

First Term Expires: October 2022

Donald Bockoven is the CEO for Fiber Industries LLC, a textile production operation based in Darlington, South Carolina. He has extensive experience over a nearly forty year career as a senior leader within both large and small companies across many industries. He specializes in transformational company growth through performance improvement. He has extensive knowledge in organizational redesign through Lean Six Sigma manufacturing practices, adaptive and advanced work systems and quality management. Mr. Bockoven has extensive board experience. He currently sits on the South Carolina Manufacturing Extension Partnership Board and recently left the South Carolina Manufacturers Association Board. At the national level, he was the vice chairman of the National Council of Textile Organization's board until April 2019 and in 2018 was appointed to the President's Advisory Committee for Trade Policy and Negotiations for a four-year term. He has also served on technical advisory boards at the community college level as well as startup companies.

E. LADON BYARS

Second Term Expires: February 2023

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 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: Resigned from the Board, March 2019

Carolyn 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 2010-2015. 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 noninvasive, pervasive technology to monitor health changes and support independent living, and the Shimadzu Institute for Research Technologies, a $25 million 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 a fellow of the 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: Resigned from the Board, March 2019

Joe Eddy is executive vice president at Justrite Safety Group and president/CEO of Eagle Manufacturing. Both companies are leaders for over 100 years in the safe storage, transfer, use and disposal of flammable and hazardous liquids. 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), 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.

KEVIN HELLER

First Term Expires: October 2022

Kevin Heller is the chief operations officer/chief financial officer of Ziegenfelder Company, located in Wheeling, West Virginia. The Ziegenfelder Company is over one hundred years old and Mr. Heller joined the company in 2004. He is responsible for all accounting, finance, business and operating activities of the company and oversight of the business policies and practices. He has been integral in scaling and facilitating the business growth from $16 million to $75 million and has successfully managed more than $25 million in expansion projects over the past four years. Mr. Heller graduated from Bethany College and is a certified public accountant in Ohio and West Virginia.

MARY ISBISTER

Second Term Expires: March 2023

Mary Isbister is president of GenMet Corporation, a custom metal fabricating company located in Mequon, Wisconsin. After graduating with a Bachelor of Science in chemistry, she worked at Pfizer in Groton, Connecticut 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 Corporation, 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 Secretary of Commerce.

MITCH MAGEE

Second Term Expires: March 2023

Mitch Magee is director of the Global Advanced Manufacturing Team for PPG's aerospace business unit. He has over 30 years of manufacturing experience, having served in capacities from front-line plant operations to global quality and environment, health and safety 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 Jack 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 has a Bachelor of Science in liberal arts from Allegheny College, a Master of Science in chemical engineering from the University of Pittsburgh and is a licensed professional engineer.

WILLIE E. MAY

First Term Expires: October 2022

Willie E. May, Ph.D. is vice president for research and economic development at Morgan State University. He previously served as Under Secretary of Commerce for Standards and Technology and Director of NIST. As NIST Director, Dr. May provided high-level oversight and direction for NIST, the agency that promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards and technology. Dr. May began as a bench chemist and went on to work at every management level within the organization. In addition to the MEP Advisory Board, Dr. May serves on science and technology advisory boards for the United Kingdom's National Physical Laboratory and China's National Institute of Metrology and on the board of directors for Consumer Reports. He earned his Bachelor of Science in chemistry from Knoxville College and his doctorate in analytical chemistry from the University of Maryland, College Park.

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-March 2017. Vermont Technical College is part of the Vermont State College System and the only technical college in the state. Prior to joining the college, Ms. Moulton served as secretary of the Vermont Agency of Commerce and Community Development. 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.

KATHAY RENNELS

Second Term Expires: March 2022

Kathay Rennels is the special advisor to the chancellor for rural-urban initiatives 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 coauthored 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

Second Term Expires: May 2023

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 corporate-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

Second Term Expires: July 2023

Leslie Taito is currently the chief of staff for Neighborhood Health Plan of Rhode Island. Neighborhood Health Plan of Rhode Island is a mission-driven organization that partners with community health centers and others to secure access to high quality, cost-effective health care for individuals, families and small businesses. Using her over 27 years of management and manufacturing experience she is able to address the crucial need for health care insurance for smaller organizations including manufacturers with less than 50 employees. Prior to her current employment, Ms. Taito served as the CEO of Hope Global, a manufacturer of products and engineering of textile solutions and as director of regulatory reform for the Rhode Island Office of Management and Budget. She has also held leadership positions as the CEO for the Rhode Island Manufacturing Extension Services, Inc., executive director of the Rhode Island Manufacturers Association and acting executive director and chief operating officer of the Rhode Island Regional Employment and Training Board. In addition to serving on the MEP Advisory Board, Ms. Taito is a member of the Polaris MEP Advisory Board. She also has served by appointment of the governor on the Rhode Island Manufacturing Advisory Council and the Lean Government Initiative. Actively involved in her community, Ms. Taito has served in executive board leadership positions and as chair of the Northern Rhode Island and North Kingstown chambers of commerce.

CHRIS WEISER

Second Term Expires: March 2023

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. 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.

JEFFREY WILCOX, IMMEDIATE PAST CHAIR

Second Term Expired: May 2019

Jeff Wilcox is vice president for digital transformation at Lockheed Martin. He oversees the Digital Transformation Office 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 at 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. Mr. Wilcox earned his Bachelor of Science in biomedical engineering from Case Western Reserve University and his Master of Science in electrical engineering from Drexel University. He holds an honorary Doctor of Engineering from Stevens Institute of Technology and serves on the Advanced Robotics for Manufacturing 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.

JIM WRIGHT

Second Term Expires: March 2023

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 over 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 U.S. He holds a Bachelor of Science and Master of Business Administration from Southern Illinois University and was a member of the Montana Manufacturing Extension Center advisory board for six 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.

Meetings

The MEP Advisory Board gathered for three face-to-face meetings in 2019. At each meeting, the Board received detailed updates from the MEP Director on the state of the MEP program and progress made toward strategic plan goals. Each meeting also included high level discussions of various topics integral to the program and report outs from the Board's working groups. These meetings provided opportunities for Board members to expand their knowledge of manufacturing technologies through academic and industry plant visits, advise and support the MEP program and actively engage with the MEP National Network. All MEP Advisory Board meeting minutes and presentations are available on the NIST MEP website.

March 29, 2019: Washington, D.C.

The first 2019 MEP Advisory Board meeting in March featured guest speaker Rob Gold from the Department of Defense (DoD) Office of the Undersecretary of Defense for Research and Engineering. He addressed critical manufacturing supply chain needs for the defense industrial base and discussed an assessment of key areas of focus for building defense manufacturing supply chain resiliency that was conducted in response to the President's Executive Order 13806 issued in July 2017. He also identified possible opportunities for the MEP Centers' participation including helping move companies toward digital manufacturing, addressing workforce challenges and working with the space industrial community.

June 18, 2019: Torrance, California

Before the June meeting, members of the MEP Advisory Board toured Boeing Satellite Systems and El Camino College's Center for Applied Technology. Workforce challenges and solutions were the key focus areas at the June meeting where NIST MEP's Mary Ann Pacelli spoke about the importance of education and other efforts to develop the future manufacturing workforce. She presented ways MEP Centers can assist clients including layoff aversion, talent planning and training (i.e. "Smart Talent") and helping companies figure out what they can do differently to recruit and retain their workforce.

Sept. 15, 2019: Atlanta, Georgia

The MEP Advisory Board met for a third time just before the MEP National Network Summit in Atlanta, a professional development gathering of MEP Center staff and stakeholders from across the nation. This meeting included concurrent roundtable discussions with MEP Advisory Board members as well as Center board leaders and NIST MEP resource managers. These discussions focused on three topics: brainstorming ways that Center boards can help MEP Centers meet strategic plan goals to increase reported projects and engage new clients, identifying each state's biggest manufacturing challenges and the resources needed to deal with them, and discussing how to use the MEP National Network to full advantage for learning and sharing resources.

After the Advisory Board meeting, the MEP Director and the MEP Advisory Board organized a dynamic manufacturing roundtable giving Deputy Secretary of Commerce Karen Dunn Kelley and Under Secretary of Commerce for Standards and Technology and NIST Director Dr. Walter Copan the opportunity to discuss directly with SMMs both the challenges they face and the potential opportunities available to them in advanced technology trends. Participating manufacturers in the roundtable included members of the MEP Advisory Board and MEP Center board chairs.

Many MEP Advisory Board members remained in Atlanta for the MEP National Network Summit, attending sessions and networking. The Summit brought together over 600 attendees from around the country to share knowledge to advance and integrate MEP National Network capabilities, strengthen the Network, improve the ways SMMs are served, and strengthen and empower U.S. manufacturers while advancing U.S. manufacturing as a whole.

Advisory Board Working Group Activities

Supply Chain Development Working Group

Of particular interest since 2017 has been MEP National Network support of defense manufacturing supply chains relating to the DoD-sponsored Manufacturing USA institutes, as well as cybersecurity for defense manufacturing. NIST MEP staff have worked with MEP Center staff embedded in Manufacturing USA institutes since 2016 to help the MEP Centers engage SMMs in the technology focus areas and market opportunities of the Manufacturing USA institutes. Programmatic results and learnings were documented in a March 2019 NIST MEP white paper. Highlights of findings include that SMMs tend to explore opportunities before making decisions to commit or implement and that they are interested in demonstration sites and interactive experiences that help them understand technologies. SMMs are also interested in state-of-the-art technologies that can be leveraged in the very near term and in local resources (within less than a two-hour drive) which are particularly helpful for engagement.

The MEP Advisory Board Supply Chain Development Working Group offers guidance and perspectives on MEP program support and development of manufacturing supply chains with an emphasis on defense suppliers. The working group focuses attention on 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, Bernadine Hawes, Mary Isbister and Chris Weiser, as well as NIST MEP staff support.

Development of MEP Center cybersecurity assistance capabilities is progressing and continues to be spurred by strong partnerships with DoD programs and mainly driven by the Defense Federal Acquisition Regulations Supplement (DFARS) requirements for defense contractors. Nondefense manufacturing sectors are not showing urgency to implement cybersecurity protections, although other supply chains such as those of the automotive and food industries are progressing and being closely monitored by the MEP National Network. The MEP Centers' service to small companies includes awareness and training. As of the September 2019 MEP Advisory Board meeting, 45 out of 51 MEP Centers offer a cybersecurity practice, more than 3,200 SMMs have been served and there have been over 496 cybersecurity projects conducted by the MEP Centers since 2014. MEP Cyber-in-a-Box is available and provides MEP Centers with tools, guidance and other information needed to create a cybersecurity assistance practice. In addition, NIST Handbook 162 has been downloaded approximately 60,000 times since it was published in November 2017.

Executive Committee Working Group

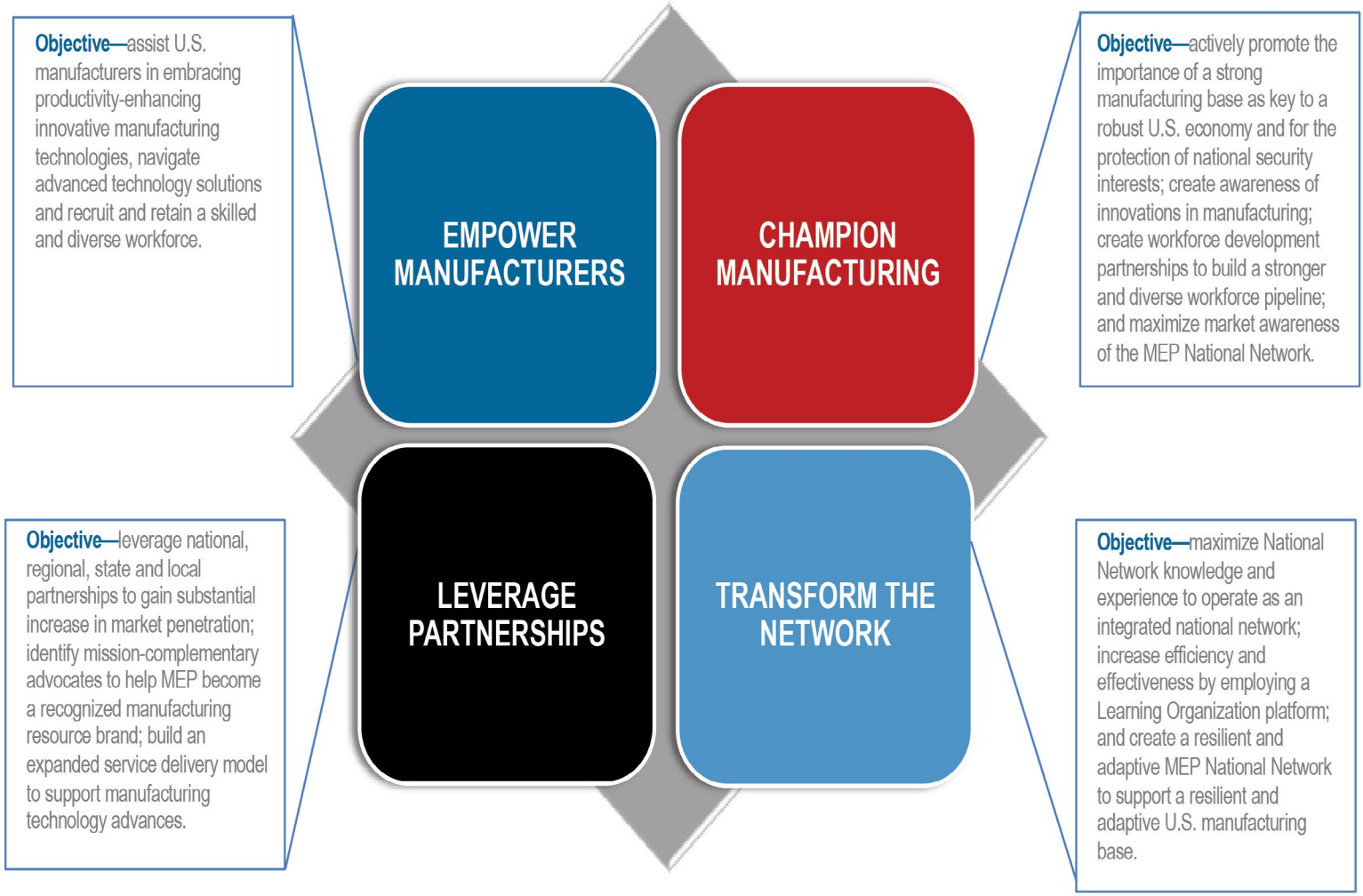
Throughout 2019 the group developed the new Center Board Outreach Program. The primary outcome of this effort will effectively connect all local MEP Center boards at the national level. The program enables MEP Advisory Board members to help Center boards better understand and engage with the MEP Centers. Current national Board members will be assigned to connect directly with individual Center board chairs to provide updates on Board activities, engage in strategic discussions that impact the MEP program at the local and national level and gather feedback to better inform the Board about Center advocacy needs. This will be a more direct connection to the MEP Centers – providing a reciprocal relationship that gives Center boards direct access to the conversations at the national level while giving the MEP Advisory Board a way to better understand MEP Center needs and achieve its statute requirements to advise on the MEP program as a whole.

The Advisory Board Executive Committee Working Group offers guidance on future MEP Advisory Board leadership and membership recruitment, provides insights into cultivating strong Board governance as well as explores 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: Bernadine Hawes and Matt Newman, co-leads, Mitch Magee, Patricia Moulton and George Spottswood, as well as NIST MEP staff support.

Strategic Plan

The MEP National Network 2017-2022 Strategic Plan continues to serve as a critical North Star of the MEP National Network as it guides the Network forward from 2017-2022. Developed in conjunction with the MEP Advisory Board, MEP Center leadership and NIST MEP staff, the strategic plan creates a sharp focus for each component of the Network with four expansive goals supporting the Network's important mission and vision. Throughout 2019, updates to the MEP Centers and the MEP Advisory Board detailed Network priorities along with measurable results outlining continuing progress. Download the full MEP National Network 2017-2022 Strategic Plan from the NIST MEP website.

Goals



MEP National Network Entity Roles Mapped to Each of the Four Goals

The MEP National Network consists of the 51 MEP Centers, NIST MEP, national MEP Advisory Board, each of the 51 MEP Center Boards and the American Small Manufacturers Coalition/Foundation for Manufacturing Excellence.

EMPOWER MANUFACTURERS

Primary Responsibility

51 MEP Centers
Center Leadership Team

Collaborative Support

NIST MEP Extension Services

Important Support

NIST MEP:
- Leadership
- Regional & State Partnerships
- Network Learning & Strategic Competitions
- Marketing & Communications
- Program Evaluation & Economic Research
- Financial Management & Center Operations
- Administration
- IT Security & Support

CHAMPION MANUFACTURING

Primary Responsibility

51 MEP Centers
NIST MEP:
- Leadership
- Extension Services
- Marketing & Communications
- Regional & State Partnerships

MEP Advisory Board
MEP Center Boards
Foundation for Manufacturing Excellence
American Small Manufacturers Coalition

Collaborative Support

NIST MEP:
- Network Learning & Strategic Competitions
- Program Evaluation & Economic Research

Important Support

NIST MEP:
- Financial Management & Center Operations
- IT Security & Support
- Staff Resource Management

LEVERAGE PARTNERSHIPS

Primary Responsibility

51 MEP Centers
Center Leadership Team
NIST MEP:
- Leadership
- Extension Services
- Marketing & Communications
- Regional & State Partnerships

MEP Center Boards

Collaborative Support

MEP Advisory Board
Foundation for Manufacturing Excellence
American Small Manufacturers Coalition
NIST MEP Program Evaluation & Economic Research

Important Support

NIST MEP:
- Administration
- Financial Management & Center Operations
- IT Security & Support
- Staff Resource Management

TRANSFORM THE NETWORK

Primary Responsibility

51 MEP Centers
Center Leadership Team
NIST MEP (All)

Collaborative Support

MEP Advisory Board
MEP Center Boards
Foundation for Manufacturing Excellence
American Small Manufacturers Coalition

SUCCESS DEFINED IN SHORT, MID AND LONG-TERM GOALS

18-MONTH MEASURES OF SUCCESS (THROUGH FY 2019):

- Piloted integrated MEP National Network approach to delivery system engaging 50% of Centers in multi-Center delivery projects.
- Increased small/rural engagements through third 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 launched the brand.

FIVE-YEAR VIVID DESCRIPTION:

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

- Recognized by SMMs 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.
- Increased our market penetration as an integrated National Network by 20%.
- Delivered integrated digitalization and cybersecurity assistance to dispersed supply chains and 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.
- Tripled the number of manufacturers served annually.
- Increased the MEP National Network impact numbers four-fold.

PROGRESS TO DATE AND NEXT 18-MONTH SUCCESS MEASURES DEFINED

Steady progress toward the first 18-month measures of success was seen across the Network and the September 2019 MEP Advisory Board meeting featured reports of this progress on key measures of success in terms of an integrated National Network, efficiency in small/rural engagements, Center and program office operational excellence and increased visibility of MEP National Network brand awareness.

New goals and baselines for each of these new measures moving forward were also discussed. The new 18-month goals are:

- Reaching consensus across the MEP National Network on the definition of project and client manufacturing establishment interaction to ensure accurate and consistent measurement.
- Operationally improving reporting via measurement of on-time and accurate reporting.
- Increasing reported projects by 10% and reported new clients by 5%.
- Amplifying and measuring MEP National Network brand awareness by at least 10%.

MEP National Network-Building Update

In 2019, MEP continued to make great strides toward functioning as a truly integrated National Network made up of the 51 MEP Centers in all 50 states and Puerto Rico, the MEP Advisory Board, the 51 Center boards, the Foundation for Manufacturing Excellence and the American Small Manufacturers Coalition working side by side with NIST MEP.

In 2019, the new Alaska MEP Center at the University of Alaska Anchorage joined the Network and is already doing important work to support the 550 manufacturers in Alaska that are vital to the local economy.

MEP United: MEP National Network Summit

Atlanta, Georgia and the Georgia MEP provided a warm welcome for the MEP National Network Summit on Sept. 15-18, 2019. The Summit brought together more than 600 representatives of the MEP National Network and was a wonderful forum for learning and sharing.

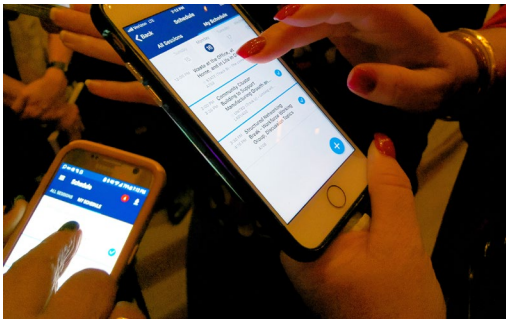
Dr. Copan provided opening remarks for the Summit, where he expressed enthusiastic support for NIST's involvement in assisting the manufacturing sector of the U.S. economy. Deputy Secretary Kelley was the featured first day keynote speaker, recalling the administration's inspiring efforts to support manufacturing.

Manufacturing Roundtable

Deputy Secretary of Commerce Karen Dunn Kelley participated in a manufacturing roundtable that gave her and Undersecretary of Commerce for Standards and Technology and NIST Director Dr. Walter Copan the opportunity to discuss directly with SMMs both the challenges they face and the potential opportunities available to them in advancing technology trends. Participating manufacturers in the roundtable included members of the MEP Advisory Board and MEP Center board chairs.

The Summit is a biennial event for the 51 MEP Centers and their staffs to gather together to share knowledge and to advance the integration of overall Network capabilities through multiple plenary meetings as well as over 50 breakout sessions.





These sessions centered on three tracks derived from the Summit's theme, the United State of Manufacturing. Tracks included uniting the manufacturing partners and ecosystems, the current state of services and knowledge sharing, and manufacturing technology and trends.

Attendees, including those from the 51 MEP Centers, Department of Commerce, NIST and other organizations, built on earlier efforts and discussed services and solutions to grow the Network, improve ways to serve SMMs and meet the NIST MEP mission to strengthen and empower U.S. manufacturers.




Policy Academy 2019-2020

Policy Academy is a year-long program that helps spur creative action to strengthen the competitiveness of the manufacturing sector, its firms and their workers. Teams work to identify issues and opportunities requiring attention in their state and propose approaches, including levers, policies, practices and initiatives, for further investigation and possible investment. The Policy Academy is funded by NIST MEP and led by SSTI and the Center for Regional Economic Competitiveness.

The program's first cohort kicked off with four states focused on the theme "Strengthening Your State's Manufacturers." Teams of policy makers and industry representatives from Kentucky, New Jersey, Puerto Rico and Utah met in person for the first time in August 2018 and quickly formed a community of practice based on a shared understanding of the challenges that manufacturers in their states faced.

Over the course of the year-long Policy Academy, the teams worked with a broad group of stakeholders in their state to develop a unique action plan aimed at addressing challenges and capturing new opportunities. The state team leads met regularly with each other – occasionally in person, but more often through conference calls and webinars – getting just-in-time technical assistance from experts and sharing ideas for new approaches to working with manufacturers.

The cohort one states were joined in August 2019 by nine states participating in a second cohort, including: Arizona, Colorado, Illinois, Maryland, Missouri, North Carolina, Pennsylvania, Vermont and Wisconsin. The states differ in their geography and demographics, but they quickly identified common challenges and worked to address those challenges, including:

Strengthen the manufacturing workforce.
Most of the workforce efforts focused on introducing or improving efforts to attract new talent to manufacturing, developing training programs to meet specific industry needs and promoting apprenticeship opportunities.

Encourage better connections between companies and the innovation ecosystem.
Some approaches included changing the way their MEP Centers work with universities, introducing an innovation voucher program and creating an industry liaison office interface for universities.

Make state programs and resources more business-friendly and easier to access.
Approaches included streamlining incentive programs and creating a state resources guide for companies.

Manufacturing Day October 2019

Held the first Friday of every October, Manufacturing Day (MFG Day) gives manufacturers an opportunity to open their doors and show, in a coordinated effort, both what manufacturing is and what it isn't. By working together during and after MFG Day, manufacturers help to address the skilled labor shortage they face, connect with future generations, take charge of the public image of manufacturing and ensure the ongoing prosperity of the manufacturing industry. Many MEP Centers participate in MFG Day each year, helping hundreds of SMMs across the country plan, orchestrate and promote their MFG Day events.

Created by founding partner Fabricators and Manufacturers Association, International (FMA) in 2012, MFG Day has enjoyed support from many organizations aligned with its mission of positively changing the public perception of modern manufacturing. NIST MEP, along with the National Association of Manufacturers (NAM) and the Manufacturing Institute (MI), has played a vital role in working with FMA to successfully grow this national celebration of all things manufacturing. MFG Day is now produced annually by NAM with key contributions and support from NIST MEP and the MI, as well as a number of corporate sponsors. MFG Day is supported by national organizations including the federal government, and by state and local entities alike.

MFG Day 2019 continued the annual celebration of modern manufacturing meant to inspire the next generation of manufacturers with continued support and participation from NIST MEP. In 2019, the White House issued an official presidential proclamation and federal government leadership, including NIST and NIST MEP staff, participated in events around the country. Some of the federal staff involved in events included Deputy Secretary of Commerce Karen Dunn Kelley, SelectUSA Executive Director Brian Lenihan and NIST Associate Director for Innovation and Industry Services Dr. Phil Singerman. Events across the country also received support from state and local officials, congressional representatives, educational institutions, media and others.

2019 MEP Center Highlights

MEP National Network Center Leadership Team

Established in 2017, the MEP National Network Center Leadership Team (CLT) has gained momentum and is having a wide impact across the MEP Centers and the rest of the Network. The CLT includes leaders from MEP Centers who interact with the NIST MEP leadership team to provide MEP Center strategies, identify funding opportunities, support the MEP National Network brand, validate multistate project processes, provide Center guidance and promote efforts for the Network to successfully serve more manufacturers.

2019 MEP National Network CLT Committees

The CLT provides input for initiatives that enhance MEP Center performance and also lays a foundation for the Network to address the current and future needs of SMMs by leading CLT committees in key areas. The CLT itself is a diverse team representing large and small Centers and various types of host institutions. This diversity is enhanced by the inclusion of additional MEP Center directors from across the country on CLT committees.

Each CLT committee is led by a member of the CLT who serves as the committee champion. Committee members include volunteers from MEP Center leadership and additional key stakeholders that add value to the committee. CLT committees met regularly throughout 2019 to plan and implement their work and these activities are a key part of CLT efforts.

2019 MEP National Network CLT Committees

Communications Committee – This committee communicates clearly to all stakeholders the brand and important Network information including Center impacts. Using digital tools to expand the capability for the Network to communicate efficiently and effectively with partners, industry and stakeholders, this committee coordinates with NIST MEP and the American Small Manufacturers Coalition to deliver Network performance to stakeholders.

Learning Committee – This committee evaluates the learning needs of the MEP Centers, identifies and improves current learning mechanisms and creates new mechanisms for Center learning as part of the Network. This committee engages Center staff at all levels through learning organizations, summits, meetings and communities of interest.

Manufacturing and Technology Committee – This committee coordinates the generation of new services and technologies for dissemination to Centers throughout the U.S. These customer-driven solutions will increase Center capabilities and allow them to think more broadly about their ability to serve their manufacturing community. This committee also builds Center teams focused on securing NIST MEP supplemental funding that enables development of improved capabilities and approaches to solving SMM technology challenges.

Multistate Engagement Committee – An important strength of the Network is that multiple Centers can work collaboratively to serve manufacturers across the nation. To take fuller advantage of this capability, in 2019 the Multistate Engagement Committee developed a Multistate Engagement Memorandum of Understanding that establishes protocols and guidelines for MEP Centers to work together on multistate client projects that will reduce the business friction of multiple Centers working together and increase the velocity and frequency of collaborative projects across multiple Centers.

Network Evolution Committee – This committee focuses on the adoption of principles and behaviors that create a functioning operational network of MEP Centers. The committee fosters coordination and feedback mechanisms that result in new ways to improve the network of Centers as clients' needs change.

Outreach Committee – To succeed, the MEP National Network needs all Centers involved and committed to the National Network model. In the short term, the Outreach Committee is charged with helping build the National Network by communicating the philosophy, ethos and behaviors that have been defined and also making stakeholders aware of the value and requirements of being part of the National Network. Outreach involves direct and individual communication with Centers and stakeholders with clear messages about the purpose and value of the MEP National Network.

Tab Wilkins Emerging MEP Leaders Program

The Emerging Leaders Program was established in 2008 and has engaged 158 participants from 47 MEP Centers. Candidates are typically senior staff from MEP Centers who will benefit from in-depth and intensive learning experiences that broaden their perspective on running and managing an MEP Center. The program was renamed the Tab Wilkins Emerging MEP Leaders Program at the 2019 MEP National Network Summit in Atlanta, Georgia in honor of the late NIST MEP staffer Bruce (Tab) Wilkins who was the thought leader behind the success of the program.

The program requires a one-year commitment from participating MEP Center staff to work on various projects to identify, understand and unravel solutions to challenges faced by manufacturers in the ever-evolving ecosystem. Webinars and projects are required for participants and these shared experiences encourage collaboration and creative thinking. Participants are able to identify and draw on best practices from around the MEP National Network and help develop creative new solutions to Center challenges. The program also creates a platform to transfer knowledge among peers.

A survey of MEP Center directors and previous class participants was conducted to gauge the benefits over the first nine years of the program. Center directors and participants indicated that there was significant knowledge gained in many topical areas and that participants continued to network with people they met through the program. Survey respondents noted that the Tab Wilkins Emerging MEP Leaders Program is an exceptional process for MEP Center staff to learn more about the MEP National Network, its mission and primary focus areas while developing leadership skills and networking with other MEP Centers.

Alaska MEP Kickoff

On March 15, 2019, the University of Alaska Anchorage was awarded the agreement to serve as the new MEP Center for the state of Alaska. NIST MEP held the Alaska MEP (AK MEP) kickoff meeting on the NIST Gaithersburg campus on July 31-Aug. 1, 2019 to provide AK MEP leaders with information on resources and support available to them through the MEP National Network.

Competitive Awards Program Increasing Key Services Across the Network

As part of NIST MEP's ongoing efforts to make the MEP National Network more effective and efficient, in 2017 NIST MEP launched the performance-based Competitive Awards Program (CAP). These awards are intended to add capabilities to the MEP National Network, 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 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 NIST laboratory organizational units 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.

Building on the success of the past two years, MEP expanded the portfolio of projects in 2019 with seven new CAP awards located in seven states and totaling approximately $7.09 million. The topical areas of these 2019 awards include two advanced manufacturing concept centers, food safety, advanced manufacturing technology/Industry 4.0 acceleration, Kata in a Box and workforce development. The seven projects include 14 additional MEP Centers as partners.

The opportunity to compete for each of these awards was issued as part of the NIST MEP Notice of Funding Opportunities (NOFOs). CAP Awards went to the following MEP Centers:

- **FloridaMakes,** Orlando, Florida: Aero-Flex Apprenticeship.
- **Maine MEP,** Augusta, Maine: Building Additive Manufacturing Capabilities in Maine.
- **Massachusetts MEP,** Worcester, Massachusetts: Human Capital Barometrics.
- **New Jersey MEP,** Cedar Knolls, New Jersey: MEP National Network Quality, Safe, Efficient Food Industry Network.
- **Oregon MEP,** Portland, Oregon: Advanced Manufacturing Technology/Industry 4.0 Acceleration Program.
- **Pennsylvania MEP,** Williamsport, Pennsylvania: Kata in a Box - MEP Collaborative.
- **University of Rhode Island Research Foundation,** Kingston, Rhode Island: Technology Acceleration Connection Program for DoD, Industry and Academia.

To date, NIST MEP has funded 22 awards totaling over $19.2 million in federal funding with project durations of 2-3 years. In addition, the projects are engaging and providing manufacturing practice development funding to MEP Center partners around the country.

Embedding MEP in Manufacturing USA Institutes

Beginning in 2016, NIST MEP made a series of 14 special project awards to the MEP National Network to embed MEP Center staff at each of the Manufacturing USA institutes around the U.S. With a formal competitive process, these 14 funding awards to MEP Centers provided a total of approximately $15.7 million for one-time, two-year pilot projects connecting each Manufacturing USA institute to a lead MEP Center and through that Center to the entire MEP National Network. To most effectively understand the unique capabilities, specialized technological focus and related market opportunities of the Manufacturing USA institutes, each pilot project supported the focus of one staff person embedded at their partner institute.

With most of these special projects ending in 2019, efforts transitioned during 2019 to the lessons learned from this work. Much of this conversation focused on how to engage small manufacturers with advanced manufacturing technologies and markets associated with the Manufacturing USA institutes. Discussion also included broader applications for advanced manufacturing technology services beyond the specific connections with Manufacturing USA institutes.

These pilot projects have resulted in significant learning for both the MEP National Network and the Manufacturing USA institutes. For the MEP National Network, the projects have identified processes and mechanisms that enable MEP Centers to engage SMMs about advanced manufacturing technologies and markets associated with specific technologies and technical focus areas. As the entire portfolio of projects to embed MEP Centers in Manufacturing USA institutes concludes in FY 2020, NIST MEP will be transitioning the MEP National Network learning from this collaboration into the next phase of technical assistance that MEP Centers offer to small U.S. manufacturers relating to advanced manufacturing technology. It is anticipated that MEP Centers will continue to engage and collaborate with Manufacturing USA institutes going forward.

Advanced Manufacturing Technology Services/Industry 4.0

During 2019, a group of MEP Centers led by Oregon MEP operated a NIST MEP-funded CAP project to gather information from MEP Centers about advanced manufacturing technology services/Industry 4.0-related technical assistance. In conjunction with this CAP project and the conclusion of the embedding projects, NIST MEP set a strategic direction for the MEP National Network to emphasize increased advanced manufacturing technology assistance. Specifically, the MEP National Network focus is on advanced manufacturing technology services/Industry 4.0 including any technologies that enable digitally connected, smart manufacturing systems within factories and across manufacturing supply chains. An emphasis of advanced manufacturing technology services/Industry 4.0 also focuses on the end-to-end digitization of all physical assets and integration into digital ecosystems.

Cybersecurity for Manufacturing

During 2019, the MEP National Network continued to develop the capabilities and capacities of MEP Centers to provide cybersecurity assistance to SMMs on a national scale. Having previously set the target for the MEP National Network to be able to provide any manufacturer located anywhere in the country with the cybersecurity assistance it needs, the MEP National Network during 2019 reached the position of having nationwide capabilities in cybersecurity. While not every MEP Center is fully proficient in cybersecurity, MEP Centers nationwide provide cybersecurity awareness and technical assistance to SMMs, either directly or through engagement with MEP National Network partnerships.

MEP cybersecurity for manufacturing work continues to be spurred by the defense manufacturing sector. During 2019, the MEP National Network executed a partnership with the Office of the Secretary of Defense (OSD) that leverages several dozen MEP Centers around the country to provide cybersecurity awareness and technical assistance to small defense manufacturing companies who are required to protect the controlled unclassified information included in their defense contracts. This work is targeting the provision of cybersecurity awareness and assistance by MEP Centers to over 1,000 small defense manufacturers by the end of 2020. MEP Centers are helping small defense contractors understand and implement the cybersecurity protections they must have in place as required by the Defense Federal Acquisition Regulations Supplement (DFARS).

This MEP partnership with OSD also includes an active partnership with the NIST laboratories to develop and pilot implementation guidance associated with the NIST Cybersecurity Framework Manufacturing Profile. This work specifically targets the implementation of cybersecurity protections for the operational technology aspects of manufacturing environments. Additionally, MEP Centers continued to participate in grants made by the Office of Economic Adjustment (OEA) Defense Industry Adjustment Program relating to cybersecurity, with an ongoing emphasis on workforce education and training.

Cybersecurity Notice of Funding Opportunity Award

In August 2019, Michigan Manufacturing Technology Center (MMTC, the Michigan MEP Center) received an award of $1,074,000 in federal funds as part of the NIST MEP Cybersecurity for Defense Manufacturing Notice of Funding Opportunity (NOFO).

This NOFO represents a partnership between NIST MEP and OSD's Manufacturing Technology Program. The award enables the MMTC to lead a project involving a majority of MEP Centers around the country and leverage the expertise of the MEP National Network to assist small defense contractors in implementing cybersecurity protections needed to safeguard both covered defense information (CDI) and controlled unclassified information (CUI) being handled in defense manufacturing supply chains. The project addresses three primary tasks:

- Conduct outreach events to create awareness and educate defense contractors about the importance of cybersecurity in their operations.
- Provide defense contractors with the technical assistance needed to ensure implementation of adequate security protections for CDI and CUI.
- Coordinate the application of use case development and implementation with NIST laboratories to demonstrate leading-edge manufacturing operational technology for cybersecurity.

The MEP National Network Cybersecurity Working Group continued operation during 2019 as a primary platform for information and best practice sharing and to enable systematic engagement between Centers and cybersecurity subject matter experts from the NIST laboratories, NIST MEP and other key organizations. The working group addresses topics of high interest to MEP Centers, which during 2019 included the MEP role relating to the Cybersecurity Maturity Model Certification (CMMC) Program being developed for defense manufacturing supply chains.

Additionally, the MEP National Network continued to provide many basic tools and tips for U.S. manufacturers relating to cybersecurity through the NIST MEP website, the NIST Small Business Cybersecurity Corner website and the websites of individual MEP Centers.

Defense Manufacturing Supply Chain Support

The MEP National Network has decades of experience providing support to the U.S. defense manufacturing industrial base which, like the rest of the U.S. manufacturing sector, consists primarily of small supplier companies. The MEP National Network continues to operate partnerships with DoD agencies at the national level via NIST MEP and at the state and local levels via MEP Centers. MEP Centers are very active in providing hands-on technical assistance to defense manufacturing suppliers across a wide array of areas including:

- Assisting with cybersecurity efforts for defense manufacturing suppliers.
- Collaborating with DoD-sponsored Manufacturing USA institutes to assist small defense suppliers in leveraging advanced technologies and capitalizing on market opportunities associated with the various institutes.
- Working with DoD agencies and suppliers to integrate new technologies, best practices and manufacturing approaches into supplier production operations.

In 2019, the MEP National Network continued to support defense manufacturing supply chains relating to cybersecurity awareness and assistance for small defense contractors. In addition, the Network continued working with DoD-sponsored Manufacturing USA institutes and also interacting with the U.S. Navy in local innovation ecosystems.

Relating to cybersecurity, MEP Centers around the U.S. were very active in workforce and supply chain development grants made to state entities by the DoD OEA. These efforts focused primarily on workforce awareness, development and training relating to cybersecurity protections required for small defense manufacturers. This included cybersecurity requirements of DFARS that apply to defense acquisition contracts. Additionally, MEP Centers nationwide continued to work with DoD-funded Procurement Technical Assistance Centers to create awareness and provide training to small defense suppliers relating to DFARS cybersecurity requirements.

The MEP National Network in 2019 also began interacting with the U.S. Navy's Naval X initiative, which operates Navy Tech Bridges around the country. MEP Centers began to interact with Navy Tech Bridges to serve as connectors to local manufacturers operating near Tech Bridge locations to help accelerate innovation in manufacturing technology to address Navy needs.

Disaster Assistance Emergency Funding

In September 2019, NIST MEP awarded $250,000 in emergency funding to Ohio MEP to help manufacturers recover from straight-line winds, tornadoes, flooding, landslides and mudslides as a result of severe storms that occurred May 27-29, 2019. Ohio MEP received funding to identify and support SMMs adversely affected by the storms and flooding. The funding enabled Ohio MEP to conduct a survey of manufacturers in the impacted Ohio counties (Auglaize, Darke, Greene, Hocking, Mercer, Miami, Montgomery, Muskingum, Perry and Pickaway) and engage with those manufacturers in their recovery efforts over the next year.

Food Industry Services and FDA Partnership

The MEP National Network continued to develop nationwide capabilities and capacities for MEP Centers to provide technical assistance services to U.S. food manufacturers during 2019. MEP Centers focus on serving small U.S. food manufacturers and are emphasizing awareness and technical assistance relating to food safety.

During 2019, NIST MEP executed two national MOU partnerships relating to food safety that recognize and leverage MEP Centers across the U.S. as technical resources for small U.S. food manufacturers. The focus is to help ensure the implementation of safe food manufacturing practices and ultimately a culture of food safety. The two MOU partnerships are with the FDA and the Food Safety Preventive Controls Alliance (FSPCA). Both of these partnerships focus on different aspects of MEP Centers providing assistance to companies who must comply with requirements of the FDA Food Safety Modernization Act (FSMA). These FSMA requirements apply to all manufacturers involved in the production of both human and animal food, and the regulations focus on a preventive approach to food safety, dealing with the requirements of current good manufacturing practices, hazard analysis and risk-based preventive controls.

An MEP National Network Food Industry Services Working Group operated during 2019 with participation from several dozen MEP Centers as a primary mechanism to promote communication, best practice sharing and technical information sharing among MEP Centers. This working group also provides opportunities for MEP Center practitioners to engage with partners from both the FDA and FSPCA relating to food safety. Additionally, MEP Centers continued to operate projects via special funding from NIST MEP awards for food safety-related efforts to MEP Centers in multiple geographic regions of the nation to establish a regional-based, national footprint of food safety practice capabilities. These project awards are led by the MEP Centers in Georgia, Missouri, Montana, New Jersey and Puerto Rico.

MEP-Assisted Technology and Technical Resource (MATTR)

The MEP-Assisted Technology and Technical Resource (MATTR) service continued to develop as an operational technical assistance service for the MEP National Network in 2019. MATTR facilitates the connection of technical needs of MEP Center SMM clients with the technology and technical resources of the NIST laboratories. As a powerful connection vehicle, MATTR provides SMMs with access to the amazing resources NIST has to offer including:

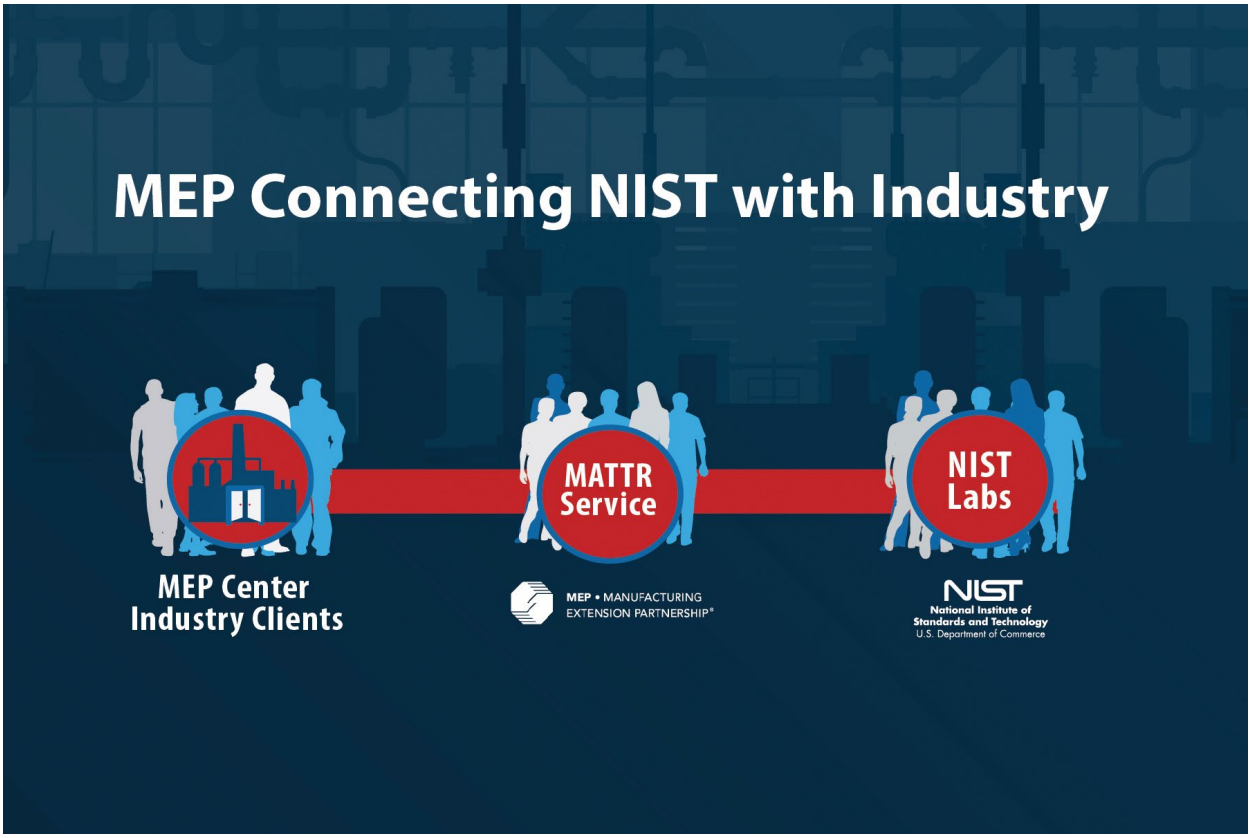
- World-class expertise and experience.
- Unique, highly capitalized and often best-in-the-world facilities.
- Leading-edge research programs.
- Technical know-how that can help SMMs improve, innovate, and create products and services.

In 2019, MATTR offered up to $500,000 dedicated NIST MEP funding resources that could be applied to NIST laboratory efforts to help MEP Center SMM clients solve challenges in areas such as:

- Quality and measurement practices, including calibrations or special measurement and testing services.
- Adopting and integrating new developments to existing technologies such as robotics, additive manufacturing and other advanced manufacturing technologies and practices.
- Understanding entirely new approaches to manufacturing, such as those enabled by the digital thread in advanced manufacturing technology/Industry 4.0.
- Leveraging and implementing industry standards and best practices relevant to process technologies and materials.
- Licensing NIST-developed technologies for manufacturing applications.

Additionally, during 2019 MATTR began to facilitate cooperative research and development agreements (CRADAs) between MEP Center SMM clients and the NIST laboratories. CRADAs can be appropriate and mutually beneficial to SMMs and the NIST labs when MEP Center SMM client needs are well-aligned with active NIST lab research, usually relating to metrology and standards. MATTR helps SMMs negotiate through these processes in terms of partnering with the NIST labs, including facilitating assistance from the NIST Technology Partnerships Office.

Through 2019, MATTR has processed nearly four dozen instances of connecting MEP Center SMM clients with NIST labs and nearly two dozen MEP Centers have participated in the service.



2019 NIST MEP Highlights

MEP National Network Brand Awareness Campaign

Increased recognition of the existence and value of the integrated MEP National Network was a milestone in 2019. This year the MEP National Network Brand Awareness campaign made important strides in reaching a greater number of SMMs with messaging in trade media including IndustryWeek, Industry Today and Quality Digest with articles, blog posts, white papers and webinars to increase awareness of MEP Center activities. This effort will continue through sharing educational and informational content created by the MEP National Network to increase Network awareness, establish our Centers as thought leaders and help further the Network's mission to strengthen and empower U.S. manufacturers.

MEP Director Carroll Thomas made site visits to all but two of the MEP Advisory Board members in 2019 that she had not previously visited, touring their operations and meeting with clients. This learning/listening tour – which included visits with Board members in Oklahoma, Arkansas and Wisconsin (left, center and right photos above, respectively) – strengthened bonds and provided firsthand understanding of the expertise, strengths, skills, challenges and passion for manufacturing that each individual brings to the Board and to the MEP National Network.

Workcred

In September 2019, Workcred, Inc., an affiliate of American National Standards Institute, received an award from NIST MEP totaling $498,845 for Research Examining the ROI of Manufacturing Credentials. As a result of a 2018 project funded by NIST, Workcred released a first-of-its-kind national manufacturing research report, "Examining Quality, Market Value, and Effectiveness of Credentials in the United States." The study revealed that credentials have uneven use in the manufacturing industry and are not routinely required or used as a major factor in hiring or promotion decisions. Many manufacturers do not know what credentials are available or how they are relevant to their workplace. Most manufacturing organizations, even if they were hiring workers with specific credentials, could not state how the credential may be positively affecting the success of the organization.

Based on the findings of the initial study, Workcred assessed that more data is needed to demonstrate the value and effectiveness of a credential. Research examining the ROI of credentials in the manufacturing space will give manufacturers a better understanding of how credentials can serve as an important resource in identifying skilled workers. In a two-year study, research will evaluate the ROI of existing manufacturing related credentials, with a focus on credentials used in the operations/production aspects of manufacturing. SMMs will be selected from clients of MEP Centers to represent a range of manufacturing sectors, facility sizes and geographic regions. The final report is expected in late 2021.

Workforce

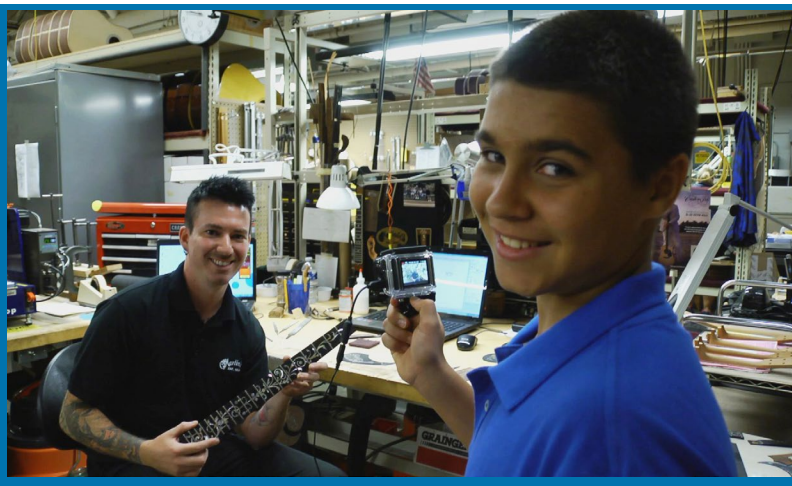
MEP Centers are continually working with smaller manufacturers to help them identify new opportunities to grow their workforce and talent. MEP Center clients frequently cite employee recruitment and retention as one of their most frequent challenges, second only to cost reduction. As innovation and the use of technology in the workplace increases, the demand for skilled workers has increased as well. MEP Centers are engaged in a wide variety of activities to help SMMs connect to resources and develop skilled workers. Essential components of these efforts include:

- Identifying training opportunities and skill certifications.
- Talent planning for growth and development of the future talent pipeline.
- Assisting companies with work-based learning, mentorships, internships and apprenticeships.

Apprenticeships are a valuable initiative to develop existing and new employees and MEP Centers are instrumental in connecting manufacturers to the local and state resources that can provide apprenticeship programming. Many Centers are helping small groups of companies implement new and customized registered apprenticeships. As part of their state manufacturing ecosystems, MEP Centers are partnering with local and state education systems including career and technical education programs, community colleges and universities to provide access to career pathways, training opportunities, mentorships, internships and apprenticeships.

MEP Centers across the country are using innovative initiatives to help build companies' workforce pipelines including:

- The Pennsylvania MEP's "What's So Cool About Manufacturing" student video contest, a series of 15 annual regional contests in which middle school students across Pennsylvania explore manufacturing careers and produce video profiles of companies. More than half of all Pennsylvania school districts have participated in the contest since it began in 2013.
- Workforce pipeline initiatives such as college internships, scholarships, a program connecting teachers with manufacturers and a robotics competition involving partnerships between high schools and manufacturers.
- Collaborations between manufacturers and colleges to help with workforce certifications and job training.



MEP Program Performance Evaluation

In March 2014, the GAO recommended that NIST MEP update its process for competition of state MEP Centers and distribution of funds. In response, NIST MEP developed a strategy for executing four separate competitions over three years. The new strategy includes ongoing performance assessment and regular 10-year competition of MEP Centers. These four rounds were completed in 2017 and included competitions for 44 states. The seven states not competed at this time – Arizona, Florida, Kentucky, Maryland, Nebraska, Rhode Island and South Dakota – had been or were in the process of being competed during 2012-2014 before the GAO report and its recommendations were issued.

As part of this process, NIST MEP is required by statute to conduct evaluations of each Center during its third and eighth years of operation. These panel reviews are intended to:

- Provide analysis, diagnosis and feedback to Centers regarding their strengths and opportunities for improvement and identify any deficiency areas.
- Include an evaluation of a Center's own Performance and Evaluation Management System effectiveness, use and self-assessment.
- Promote the sharing of information across the Network.
- Identify common Center performance gaps so the Centers can leverage internal and external resources to develop performance improvement practices. Performance is defined as market penetration and economic impact.

Round 1: The first round of performance-based peer panel reviews was conducted from December 2017-February 2018 for MEP Centers in Colorado, Connecticut, Indiana, Michigan, New Hampshire, North Carolina, Oklahoma, Oregon, Tennessee, Texas and Virginia.

Round 2: The second round of performance-based peer panel reviews was conducted from May-July 2018 for MEP Centers in Alaska, Idaho, Illinois, Minnesota, New Jersey, New York, Washington, West Virginia and Wisconsin.

Round 3: The third round of performance-based peer panel reviews was conducted from March-May 2019 for MEP Centers in Alabama, Arkansas, California, Georgia, Louisiana, Massachusetts, Missouri, Montana, Ohio, Pennsylvania, Puerto Rico, Utah and Vermont.

Round 4: A fourth round of performance-based peer panel reviews is planned for 11 MEP Centers in early FY 2020.

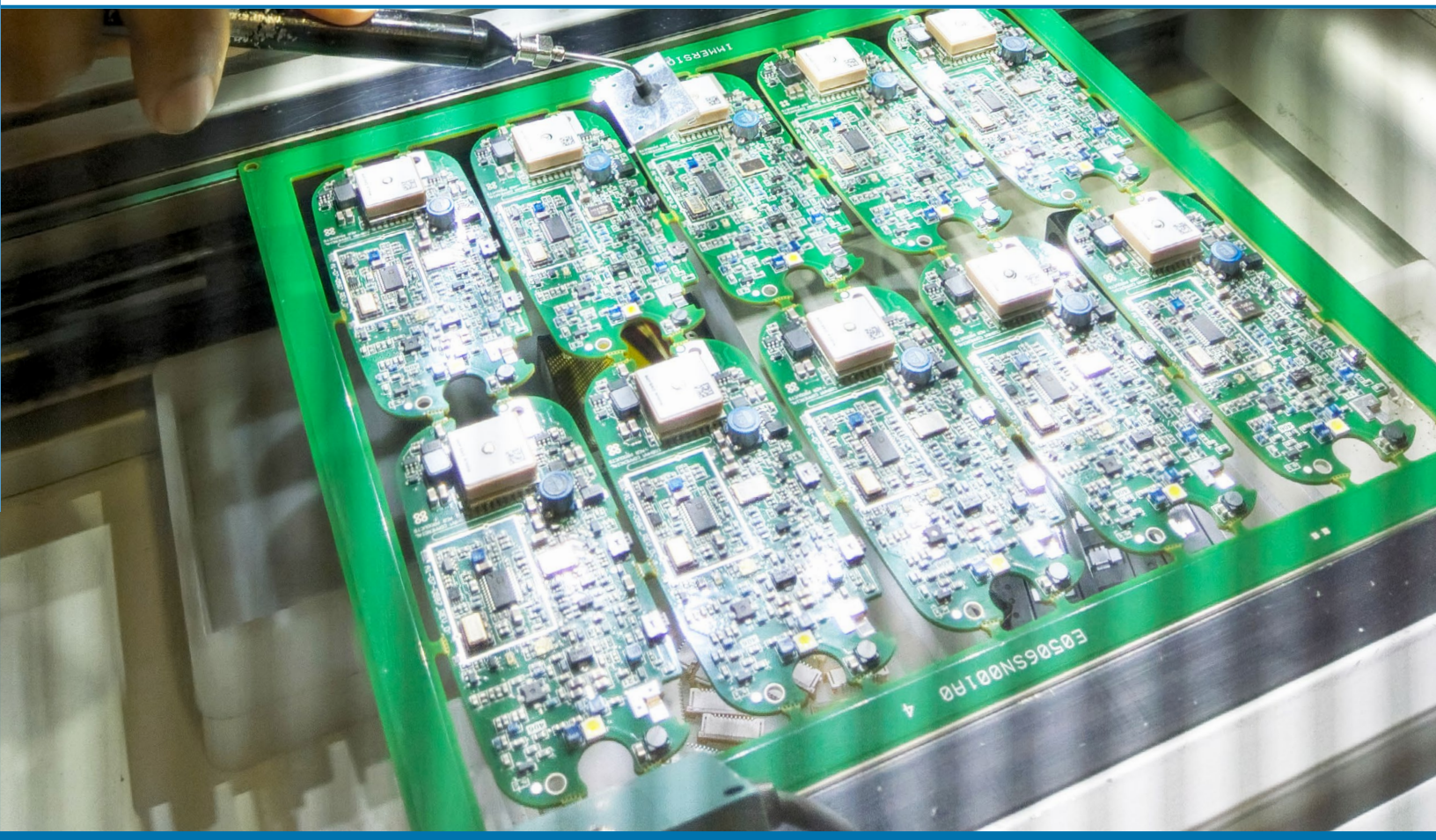
Secretarial Reviews: The seven legacy MEP Centers that were not part of the 2012-2014 competition were also not part of the panel reviews. These include Centers in Arizona, Florida, Kentucky, Maryland, Nebraska, Rhode Island and South Dakota. Under the AICA, these states are subject to the fifth year legislatively-required secretarial evaluation. As of the end of FY 2019, secretarial reviews have been completed for MEP Centers in Arizona, Kentucky, Maryland, Nebraska, Rhode Island and South Dakota. The secretarial review for the remaining legacy Center in Florida will be conducted in FY 2020.

Noted Reports

Government Accountability Office Cost Share Report

The NIST MEP program worked to change the nonfederal to federal cost share ratio from 2:1 to 1:1 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. 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), a major change in the authorizing legislation of the program.

The AICA required a report by the General Accounting Office (GAO) to Congress within two years of enactment on the impacts of the change in cost share. Based in part on input from the MEP Advisory Board, the GAO's report was published in March 2019 and is available online. The GAO reported that most Centers told them this change improved their financial stability, allowing them to better serve very small and rural companies, however the impacts of the change in the cost share were hard to distinguish from other factors. Subsequently, NIST Director Dr. Walter Copan completed and submitted a report to Congress on the first and second years of operation for Centers from the recompetition. This report, also required by the AICA, provided details on the engagement in services provided by Centers, the characteristics of services provided, and the volume and type of services.



Program Efficiencies Report

NIST submitted an annual report in April 2019 at congressional request detailing program efficiencies in response to a 2014 GAO report which required NIST MEP to show how annual appropriations for the program were disbursed. The report estimated that of the $140 million in total resources provided to NIST MEP for FY 2019, almost 89 percent ($124.1 million) would be used for direct support of MEP Centers and approximately 11 percent ($15.9 million) for administrative and/or nondirect support.

Direct support of the MEP Centers includes the cooperative agreements with each of the 51 MEP Centers nationwide, as well as funds for focused products and services that MEP Centers use with their manufacturing clients such as support for cybersecurity, state partnerships, technology acceleration, food safety, manufacturing process improvement and CAP awards. Salaries and benefits in direct support of the MEP National Network include NIST MEP staff working in partnership and program development, technology transfer efforts with NIST laboratories, network learning and knowledge management, and strategic management and operational support.

The $15.9 million appropriated for administrative and/or nondirect support include MEP program office operations and contracts that indirectly support the MEP National Network such as the Network's information technology system, independent third-party surveys of MEP Center manufacturing clients and statutorily required panel reviews. Included in administrative costs are travel expenses to conduct oversight of MEP Centers, MEP Advisory Board meetings and the biennial MEP National Network Summit, which provides an opportunity for the entire Network to come together to expand knowledge and share best practices that ultimately help U.S. SMMs. Per the GAO methodology, $4.3 million in NIST MEP staff salaries and benefits are administrative in nature or provide indirect support of the MEP National Network.

NIST Return on Investment in Technology Transfer

MEP has supported the NIST Director's Return on Investment (ROI) initiative for evaluating and recommending changes to federal technology transfer authorities and processes to improve the use of federally-funded and developed technologies by the private sector. This initiative is part of the President's Management Agenda under the Lab-to-Market cross-agency priority goal and is co-led by the Department of Commerce through NIST and the White House Office of Science and Technology Policy. NIST MEP leadership previously participated in four public meetings to gather information from a variety of sources to inform the effort, analyzed comments from the public meetings and a related request for information, and contributed sections to the draft report.

In April 2019, NIST announced 15 key findings from a final version of a "green paper" on maximizing U.S. innovation from government-funded research. Incorporating extensive feedback from industry, academic and government stakeholders, the NIST report describes options for enhancing how federally funded inventions move from the laboratory to the marketplace by:

- Streamlining federal regulations.
- Enabling greater flexibility for public-private partnerships.
- Increasing engagement with private-sector investors.
- Building a more entrepreneurial workforce.
- Improving support for innovation by clarifying the intended purpose of "march-in rights."

This green paper serves as a discussion document that informs, but does not prescribe, policy decisions by the federal government. No findings in this final green paper would require legislative changes to the Bayh-Dole Act.

Updates and New Initiatives Coming in 2020

MEP National Network Center Leadership Team

In 2020, the Center Leadership Team (CLT) will continue to strategically prepare MEP for the future. The team's emphasis in 2020 is operationalizing the MEP National Network. Interviews conducted in late 2019 with all 51 Center directors will provide input on various topics, including their understanding and perspectives of the National Network. The CLT will provide a direction forward, aligning and increasing engagement of all parts of the MEP National Network including the 51 MEP Centers, MEP Center Board members, the MEP Advisory Board, the Foundation for Manufacturing Excellence and the American Small Manufacturers Coalition as well as NIST MEP. The CLT is operationalizing multi-Center client engagements and increasing the Network's reputation as trusted go-to experts, providing the support any manufacturer needs to thrive.

Competitive Awards Program

NIST MEP will continue the successful performance-based Competitive Awards Program (CAP) in 2020, accepting applications on a rolling basis and funding projects that support the MEP National Network 2017-2022 Strategic Plan and the needs of U.S. manufacturers. NIST MEP will issue two new NOFOs in FY 2020:

1. **Manufacturing Disaster Assessment Program Awards:** MEP Centers will be able to apply for funds as needed based on Federal Emergency Management Agency disaster declarations in their regions. The funds will help MEP Centers assess impacts, identify resources and aid business recovery efforts.
2. **Advanced Manufacturing Technology Services Awards:** NIST MEP anticipates funding at least three awards, each up to $1 million, for MEP Centers to deploy advanced manufacturing technology services to SMMs. These technologies enable digitally-connected, smart manufacturing systems within factories and across manufacturing supply chains, facilitate improved product quality and innovation, improved manufacturing process efficiency and increased supply chain connectivity.

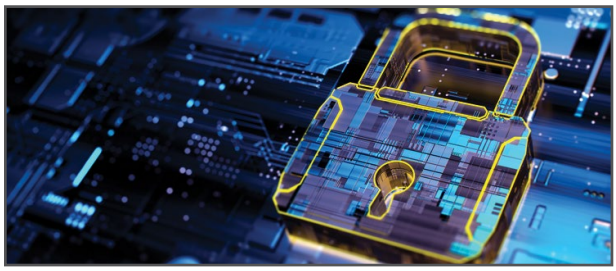
MEP National Network Initiatives

Embedding MEP into Manufacturing USA Institutes

Some NIST MEP-funded pilot projects involving the embedding of MEP Centers into Manufacturing USA institutes concluded in 2019 and by the end of 2020, all will conclude their periods of performance. The MEP National Network will transition these pilot efforts into ongoing and persistent mechanisms by which MEP Centers will provide advanced manufacturing technology services on a national scale to SMMs. Collaborations will continue between MEP Centers and Manufacturing USA institutes, but on a less formal basis as needed by small manufacturers and in conjunction with the technical assistance services provided by MEP Centers.

Advanced Manufacturing Technology Services/Industry 4.0

NIST MEP will facilitate the operation of an MEP National Network Advanced Manufacturing Technology Services/Industry 4.0 Working Group to serve as a primary mechanism to help establish and develop MEP Center technical assistance to small U.S. manufacturers in this area. This working group will highlight all that Centers are currently doing through CAP projects, the CLT and other efforts, and share success stories and best practices. MEP Centers will also receive special funding awards from NIST MEP to accelerate the nationwide provision of technical assistance services to SMMs relating to advanced manufacturing technology services/Industry 4.0.



Cybersecurity

The MEP National Network will continue to focus on awareness and technical assistance to small U.S. manufacturers who operate as defense contractors within defense manufacturing supply chains. Networkwide efforts working with national partners and funding from OSD will be central to this. MEP Centers' role relating to the DoD's new CMMC Program will also be addressed. Additionally, cybersecurity protections as foundational to overall risk management and integration into advanced manufacturing technology-based manufacturing approaches will be highlighted by the MEP National Network.

Defense Manufacturing Supply Chain Support

The MEP National Network will continue to provide cybersecurity assistance for defense manufacturing supply chains, focusing on small defense contractors. MEP Centers will also begin to play important roles relating to local innovation ecosystems and help connect small manufacturers into these ecosystems. A new partnership with the U.S. Navy Tech Bridge initiatives will be central to this effort.

MATTR

The MEP National Network MATTR Working Group will continue its efforts to add value to the MEP National Network, to respond to the needs of SMMs for technical assistance and to the NIST laboratories that engage with SMMs through the MATTR service. The MATTR service will continue to operate as a mechanism to facilitate engagements between MEP Center client companies and the NIST laboratories. MEP Connect, a web-based platform designed to facilitate successful online engagement and collaboration among the MEP National Network, will be leveraged as a tool to facilitate the MATTR process. When appropriate, MATTR will facilitate and operate CRADAs between MEP Center clients and NIST laboratories, and NIST MEP will play a central role throughout the process.

Food Industry Services and Food Safety

The MEP National Network Food Industry Services Working Group will continue to play a pivotal role in the development of MEP National Network capabilities to deliver technical assistance to small U.S. food manufacturers, with an ongoing emphasis on implementing a culture of food safety across the sector. The formal partnerships between the MEP National Network and both FDA and FSPCA will continue to operate and add value to MEP Centers' ability to serve as trusted advisors relating to food safety.

Workforce

Capitalizing on the work completed with CAP Award funds, several MEP Centers including those in Hawaii, Montana, Oregon, Puerto Rico and Tennessee are collaborating to refine a workforce engagement model originally developed by Oregon MEP. SMART Talent helps companies overcome the skills and talent shortage through in-house training development. Reducing the learning hurdle for new employees should help underrepresented populations gain access to job opportunities. The program focuses on work-based training and creation of a learning culture that provides clear career ladders, development paths, and performance management and compensation systems.

Manufacturing Day 2020

Manufacturing Day (MFG Day) 2020 on Oct. 2, 2020 will mark NIST MEP's ninth year of participation. On MFG Day 2020, NIST MEP and MEP Centers will draw public attention to manufacturing's present-day reality and encourage careers in this secure and growing sector of the economy. MEP Centers will work with local manufacturers to plan events and spread the word about MFG Day 2020 to ensure its success.

We believe that by being an active part of this national outreach effort manufacturers will find additional resources to address the skilled-labor shortage many face, connect with future generations, take charge of the public image of manufacturing and help ensure a prosperous future for manufacturing throughout the U.S.

Performance-Based Peer Panel and Secretarial Reviews

A fourth round of performance-based peer panel reviews is planned in early FY 2020 for MEP Centers in Delaware, Hawaii, Iowa, Kansas, Maine, Mississippi, Nevada, New Mexico, North Dakota, South Carolina and Wyoming.

Under the AICA, the seven legacy MEP Centers that were not part of the 2012-2014 competition are subject to fifth year legislatively-required secretarial evaluations. Secretarial reviews were completed for six MEP Centers in 2019 and the remaining one, in Florida, is planned for 2020. In addition, secretarial evaluations are planned in 2020 for 11 Centers from the Round One competition: Colorado, Connecticut, Indiana, Michigan, New Hampshire, North Carolina, Oklahoma, Oregon, Tennessee, Texas and Virginia. Secretarial evaluations are also planned in 2020 for eight Centers from the Round Two competition: Idaho, Illinois, Minnesota, New Jersey, New York, Washington, West Virginia and Wisconsin.

MEP Centers

MEP Centers serve as the foundation of the MEP program. 51 MEP Centers are located in all 50 states and Puerto Rico. More than 1,400 trusted advisors and experts at approximately 375 MEP service locations provide any U.S. manufacturer with access to resources they need to succeed.

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Alaska-MEP.com

Arizona
Arizona Manufacturing Extension Partnership (Arizona MEP)
100 N. Seventh Ave., Suite 400
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Phone: 602-845-1200
www.azmep.com

Arkansas
Arkansas Economic Development Commission Manufacturing Solutions (AEDC-MS)
900 W. Capitol Ave., Suite 400
Little Rock, AR 72201
Phone: 501-683-4411
www.mfgsolutions.org

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www.cmtc.com

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