

**National Institute of Standards and Technology
Manufacturing Extension Partnership
Advisory Board
Minutes of the September 22, 2020 Meeting**

Background

The Department of Commerce (DOC), National Institute of Standards and Technology (NIST), Manufacturing Extension Partnership (MEP) Advisory Board (Board) met in an open session from 1 p.m. to 5 p.m. on September 22, 2020, via video teleconference. The meeting had 100 attendees including Board members, NIST and NIST MEP staff, participants from MEP Centers, guest speakers and observers. Cheryl Gendron is the Designated Federal Officer for the MEP Advisory Board.

Attendees

Board Members

Jose Anaya, Dean of Community Advancement, El Camino College
Donald Bockoven, CEO, Fiber Industries LLC
E. LaDon Byars, President and CEO, Colonial Diversified Polymer Products, LLC
Kevin Heller, CEO and CFO, Ziegenfelder Company
Mary Isbister, Vice Chair, MEP Advisory Board and President, GenMet Corporation
Mitch Magee, Director, Global Advanced Manufacturing Team, PPG Aerospace Business Unit
Patricia Moulton, President, Vermont Technical College
Matthew Newman, Chair, MEP Advisory Board and Director of Sustainability Advocacy and Development, ONEOK, Inc.
Kathay Rennels, Special Advisor to the Chancellor for Rural-Urban Initiatives, Colorado State University System
George Spottswood, Owner and CEO, Quality Filters, Inc.
Leslie Taito, Chief of Staff, Neighborhood Health Plan of Rhode Island
Jim Wright, Vice President of Operations, Proof Research

NIST MEP Participants

Cheryl Gendron, NIST MEP Advisory Board Liaison and Designated Federal Officer, MEP Advisory Board
Rob Ivester, Ph.D., MEP Deputy Director
David Stieren, NIST MEP Division Chief for Extension Services
Carroll Thomas, MEP Director

Guest Speakers

Mojdeh Bahar, NIST Associate Director for Innovation and Industry Services
Dan Berglund, SSTI
Walter Copan, Under Secretary of Commerce for Standards and Technology and NIST Director

Observers

Ray Aguerrevere, Custom Metal Fabricators
Nicole Ausherman, NIST MEP
Mellissa Ayala, NIST MEP

Anita Balachandra, NIST MEP
Robert Barnes, NIST MEP
Steve Black, Utah MEP
Dayna Blanchard, MEP of Louisiana (MEPOL)
Megean Blum, NIST MEP
Buckley Brinkman, Wisconsin Center for Manufacturing & Productivity
Monica Claussen, NIST MEP
Mike Coast, Michigan Manufacturing Technology Center
Jose Colucci-Rios, NIST MEP
Dusty Cruise, Missouri Enterprise
Anthony Diaz, NIST MEP
Xavier Escoto, NIST Fellow
Kristy Grignon, Massachusetts MEP (MassMEP)
Jennifer Hagan-Dier, NIST MEP/Manufacturer's Edge
Diane Henderson, NIST MEP
Jessica Herbert, Empire State Development
Carrie Hines, American Small Manufacturers Coalition/Foundation for Manufacturing Excellence
KeAnne Hoag, North Carolina MEP (NC MEP)
Kimberly Ingalls, MassMEP
John Kennedy, New Jersey MEP (NJMEP)
Brian Lagas, NIST MEP
Wiza Lequin, NIST MEP
Paul Lucy, Impact Dakota
Chancy Lyford, NIST MEP
Kathie Mahoney, MassMEP
Heather Mayton, NIST MEP
Kevin McIntyre, NIST MEP
Alex Melnikow, LEXNIKO, LLC
Dimitrios Meritus, NIST MEP
Phil Mintz, NC MEP
Petra Mitchell, Catalyst Connection
Justin Mocca, NIST MEP
K.C. Morris, NIST
Andrew Nobleman, NIST MEP
Mike O'Donnell, Center for Industrial Research and Service
Mary Ann Pacelli, NIST MEP
Srinivas Palanki, TMAC
Sanju Patro, TMAC
Andrew Peterson, NIST MEP
Kim Pinckney, NIST MEP
Ken Poole, Center for Regional Economic Competitiveness
Katie Rapp, NIST MEP
Kari Reidy, NIST
Kathy Rich, Montana Manufacturing Extension Center
Rikki Riegner, Pennsylvania MEP
Chris Rooney, Empire State Development
Jennifer Rosa, NIST MEP
Scott Ryan, Ohio Development Services Agency
Cheryl Rybka, TMAC
Gerson Santos-Leon, NIST MEP
Mark Schmit, NIST MEP

Carol Shibley, NIST MEP
Nelli Sichwart, Bossier Parish Community College
Mike Simpson, NIST MEP
Phil Singerman, NIST Associate
Megan Spangler, NIST MEP
Michael Stone, Stone and Associates
Rustyn Stoops, Delaware MEP
Tiffany Stovall, Kansas Manufacturing Solutions
Daniel Stumper, MEPOL
Michael Taylor, NIST MEP
Dileep Thatte, NIST MEP
Nico Thomas, NIST MEP
Paula Trimble, Lewis-Burke Associates LLC
Mark Troppe, Center for Regional Economic Competitiveness
Mike Vanier, Oregon MEP
Tim Vickers, Advantage Kentucky Alliance
Ben Vickery, NIST MEP
Kayla Viveiros, Polaris MEP
Ken Voytek, NIST MEP
Phillip Wadsworth, NIST MEP
Marlon Walker, NIST MEP
James Watson, California Manufacturing Technology Consulting (CMTC)
Matt Watson, Empire State Development
Samm Webb, NIST MEP
Jenni West, Montana Manufacturing Extension Center
Michael Wilson, NIST MEP
Bob Zider, Vermont Manufacturing Extension Center

Welcome and Introductions

Speakers:

Matt Newman, NIST MEP Advisory Board Chair
Carroll Thomas, MEP Director
Walter Copan, NIST Director
Mojdeh Bahar, NIST Associate Director for Innovation and Industry Services

M. Newman reviewed the agenda and made introductory remarks. C. Thomas welcomed everyone to the meeting and introduced W. Copan. He thanked the MEP Advisory Board (MAB) members for their service and also thanked all of the NIST MEP staff. He congratulated C. Thomas and her team for helping to get CARES Act funding distributed quickly and effectively to each of the Centers across the nation. NIST is looking to the future for America's manufacturers and its supply chains, and there is a focus on reshoring which means more capacity in the country. More workforce needs to be prepared to take the mantle of American manufacturing. As they look to the future, more companies need to adopt Industry 4.0, digital manufacturing, industrial internet of things solutions and automation approaches. The MEP National Network™ (MEPNN) has a lot on its plate. He thanked C. Thomas for the leadership and support she has provided in contributing to NIST MEP's success during her tenure as Director. He then introduced M. Bahar. She thanked Board members for bringing their expertise and passion to NIST and the MEPNN to help them better serve small and medium-sized manufacturers (SMMs). NIST Leadership hopes, with help of the MAB, to identify more ways in which NIST can help strengthen manufacturing in

the U.S. The pandemic has underscored in many ways the importance of manufacturing in America. Board members and attendees were introduced.

NIST MEP Senior Management Update

Speakers:

Carroll Thomas, MEP Director

Rob Ivester, MEP Deputy Director

MEP Program Budget Outlook (as of September 22, 2020)

- Fiscal Year (FY) 2020 appropriation status:
 - Base funding: \$146 million.
 - \$6 million increase over FY 2019.
 - No cost share requirement.
 - Coronavirus Aid, Relief, and Economic Security (CARES) Act.
 - MEP received \$50 million to provide funding to all MEP Centers to assist manufacturers.
- FY 2021 appropriation status:
 - House mark: \$153 million.
 - Awaiting Senate mark and subsequent congressional conference committee report or a continuing resolution so as not to have a lapse in appropriations.

NIST MEP FY 2020 Projected Spend Plan

- Available Funding:
 - Full year appropriation: \$146 million.
 - Carryover from FY 2019: \$4.7 million.
 - Funding from other agencies: \$0.3 million.
 - CARES Act supplemental funding: \$50 million.
 - Total available funding: \$201 million.
- Planned Expenditures:
 - Center renewals: \$111.7 million.
 - Center supplemental funding (CARES Act): \$49.1 million.
 - Strategic competitions: \$17.5 million.
 - Contracts: \$3.8 million.
 - NIST MEP labor: \$10 million.
 - NIST and program overhead: \$8.9 million.
 - Total planned expenditures: \$201 million.

Legislative Update

- The \$50 million appropriated in the CARES Act for MEP Centers was sent out in record time. While another stimulus bill is being discussed, no agreements have yet been reached.
- The National Defense Authorization Act (NDAA) for FY 2021 currently is in conference and could pass with two important amendments impacting the MEPNN.
 - Allows the Department of Defense (DOD) to provide funds to MEP Centers for cybersecurity assistance of SMMs.
 - Would establish a database housed at NIST MEP:
 - Connect MEP Centers to minimize vulnerability to supply chain disruptions.
 - Enhance the ability of U.S. manufacturers to communicate and coordinate.
 - Ensure that the U.S. responds quickly and effectively during national disasters, including retooling for such items as personal protective equipment (PPE).

CARES Act Update

- All 51 awards were made by June 30, 2020.
- 85 days from posting the request for applications.
- MEP Centers executing awards to provide critical assistance to manufacturers.
- First quarterly reports will be received at the end of October 2020.

Competitive Awards Program (CAP) Funding Update

- Advanced Manufacturing Technology Services – deploys advanced manufacturing technology services, emphasizing technology-based needs of small U.S. manufacturers.
 - In June 2020, we reported four projects had been awarded.
 - In early July 2020, a fifth award was made:
 - NJMEP for Industry 4.0 technical assistance to supply chains for biopharmaceuticals and biofabrication, targeting the supply chains associated with focus areas of the National Institute for Innovation in Manufacturing Biopharmaceuticals and BioFabUSA Manufacturing USA institutes.
- (Rolling) Competitive Awards – 12 awards issued to date for mix of cybersecurity, workforce and advanced manufacturing projects.
 - Awards made to MEP Centers in California, Connecticut, Florida, Georgia, Michigan, Missouri, New York, Ohio, Oregon, Tennessee and Virginia.

MEPNN Center Leadership Team (CLT)

- Continuing to convene virtually to operationalize communication and collaboration norms.
- Working on Network structure and governance.
- Regional communication nodes created and currently being implemented. Need to create more efficient and effective ways of connecting Centers around the country to build relationships, provide support, exchange ideas and information, catalyze learning and improve communications. Better connections form the basis for a faster and more flexible National Network.
 - The urgency of times over the past few months exacerbated the need to communicate more among the Network.
 - Objectives:
 - Establish one-to-one connections between Center Directors and a Center Director on the National Network CLT;
 - Create Regional National Network nodes to facilitate regular group conversations and create learning opportunities;
 - Build closer and deeper relationships between and among Centers.
 - Information about CLT priorities, business issues and strategy is quickly disseminated throughout the MEPNN.
 - As each CLT member works with their Regional National Network Node, they bring information back to the CLT, keeping everyone in touch with all of the Centers and abreast of what is happening across the Network.
 - The structure improves access directly to CLT members and ensures that everyone in the MEPNN has a voice.
 - All regions have met and several have met multiple times.

NIST MEP: National Network Support

- MEPNN Food Industry Services/Food Safety.
 - 2017-2020.
 - 4,087 Center projects.
 - 2,649 food manufacturing clients addressing many technical assistance areas, including food safety.

- MEPNN working group facilitated by NIST MEP.
 - 51 MEP Centers participate.
- MEPNN staff with food safety credentials.
 - Approximately two dozen preventive controls qualified individuals.
 - More than one dozen lead instructors.
- Strong ongoing MEPNN partnership with Food and Drug Administration relating to food safety.
- MEP-Assisted Technology and Technical Resource (MATTR).
 - Connecting MEPNN, MEP Center clients with NIST laboratory expertise and resources.
 - 70 MATTR requests submitted by 22 Centers; 6 NIST laboratories/offices engaged in these requests.
 - 23 offers of assistance to MEPNN made by five NIST laboratories in 2020.
 - NIST laboratory staff providing webcasts to MEPNN addressing various technical topics.
 - 15 MEP Centers participating in MEPNN MATTR Working Group.
 - NIST MEP facilitating cooperative research and development agreements between MEP Center clients and NIST laboratories; also compensating NIST laboratories, as warranted, by MATTR opportunities.
- Advanced Manufacturing Technology Services.
 - Funding awards made in May and July 2020 for multi-Center projects led by Centers in California, Indiana, Michigan, New Jersey and Texas to accelerate MEP Center Industry 4.0 service delivery; additional projects among recent CAP awards.
- CAP project led by Oregon MEP.
 - Involves multiple Centers sharing useful foundational Industry 4.0 information across MEPNN.
 - Also working closely with the CLT.
 - Concluding in December 2020.
- MEPNN Industry 4.0 Working Group sharing best practices and highlighting Center work.
 - Facilitated by NIST MEP.
 - Dozens of Centers participating.
 - Introducing emerging topics to Centers.
- MEP Centers utilizing user/demonstration facilities and continuing to collaborate with Manufacturing USA Institutes.
- Cybersecurity practice developing across the Network.
 - MEPNN Cyber Working Group sharing best practices among all 51 Centers.
 - Cyber for Defense Manufacturing Special Award from NIST MEP to Michigan MEP Center providing awareness and assistance for over 1,000 defense contractors.
 - Participation from over 30 MEP Centers and two NIST laboratories.
 - Health crisis tasking delays ongoing.
 - NIST MEP issuing program guidance to MEP Centers relating to DOD Cybersecurity Maturity Model Certification (CMMC).
 - Approximately 228 awareness/training events.
 - Approximately 1,000 projects conducted since 2015.
 - Over 3,400 SMMs served.
 - Approximately 95,000 NIST Handbook 162 downloads since 2017 publication.
 - Approximately 185,000 NISTIR 7621 downloads since 2016 publication.
- Center reviews: 2020.
 - Annual reviews of all 51 Centers.
 - Panel reviews (at the third and eighth-year).
 - Currently processing three eighth-year reviews.

- Secretarial reviews (one time, at the fifth-year mark).
 - Currently processing secretarial reviews of eight Centers.

NIST MEP and MEP Centers: National Network Collaboration

- NIST MEP and the MEPNN are hosting roundtable-style conversations with manufacturing executives from across the country.
 - This series began on July 30, 2020 with six panelists and over 70 observers. Ten sessions have been scheduled.
 - Discussions focus on the current state of manufacturing during these unprecedented economic times, predictions for the future state of U.S. manufacturing and recommendations to the MEPNN.
 - The program will continue through early October 2020.
 - Results will be aggregated and reported.

MEP National Network 2017-2022 Strategic Plan Update

- 18 month measures of success (September 2019-March 2021) – progress to date.
 - Measure 1: Consensus within integrated National Network on definition of Project and client manufacturing establishment interaction.
 - Define client and project.
 - Define client manufacturing establishment interaction.
 - Working group of Center Directors established.
 - Center working group is identified and is on hold. They will reconvene in fall 2020.
 - Measure 2: Center and program office operational excellence reporting via measurement of on-time and accurate reporting.
 - Four elements measured.
 - Progress plan.
 - Progress data.
 - Success story.
 - Survey confirmation.
 - Baseline (Quarter 2 2019).
 - 40 Centers reported on time with the first three elements.
 - 24 Centers reported on time across all four elements.
 - Progress to date (Quarter 2 2020).
 - 45 Centers reported on time with first three elements.
 - 23 Centers reported on time across all four elements.
 - Measure 3: Increased visibility by amplifying Network brand awareness by at least 10% (progress to date for April 1, 2020-June 30, 2020).
 - Backlinks.
 - Baseline: 104.
 - Goal: 114.
 - Progress to date: 112.
 - Brand mentions.
 - Baseline: 125.
 - Goal: 138.
 - Progress to date: 247.
 - Manufacturing Innovation blog subscribers.
 - Baseline: 24,920.
 - Goal: 27,412.

- Progress to date: 32,026.
 - Social media followers.
 - Baseline: 16,240.
 - Goal: 17,864.
 - Progress to date: 16,640.
 - #MEPNationalNetwork hashtag occurrences.
 - Baseline: 334.
 - Goal: 367.
 - Progress to date: 391.
- Measure 4: Increase reported projects by 10% and reported new clients by 5%.
 - FY 2020 surveys and response.
 - Over 5,200 clients surveyed (combined Quarter 1 and Quarter 2).
 - 77% final survey response rate for the MEPNN.
 - Combined clients Quarter 1 and Quarter 2.
 - In July 2020, MEP Centers surveyed a combination of clients from the postponed Quarter 1 survey with those up for survey in Quarter 2.
 - Outstanding response given the number of clients surveyed was doubled, which increased Center workload.
 - Survey changes through 2021.
 - Survey response rate will be removed from the ten metrics used to measure Center performance until late 2021.
 - NIST MEP will give more weight to the two measures of market penetration in evaluating Center performance.
 - This is done to accommodate the expected increase in clients served from the CARES Act funding.

NIST MEP Operational Update

- NIST Campus Locations Status
 - All NIST staff, including NIST MEP staff, were on mandatory telework from mid-March until early July 2020 and are now on maximum telework.
 - NIST phased reopening emphasizes employee safety and focuses on laboratory staff having access to laboratories.
 - NIST staff remain on maximum telework; 90% of all staff for an extended period returning in later phases.
 - NIST MEP's Move Back In Committee has met twice and Building 301 office construction has resumed.
- NIST MEP Organizational Update
 - Andrew Nobleman joined the Center Operations Group.
 - Anita Balachandra joined the Regional and State Partnerships Division.
 - Michael Taylor joined the Extension Services Division.
 - Mike Simpson has returned from being on detail.
 - Mary Ann Pacelli is now the Chief for the Network Learning and Strategic Competitions Division.

Discussion

- M. Newman said he participated in one of the roundtable discussions with manufacturing executives and recommended that the Board members listen in on future roundtables. He requested that NIST MEP staff notify members of when they will occur.

- M. Isbister asked if there were opportunities for NIST MEP to leverage content they and the Centers have developed to bring in funding from other federal agencies. C. Thomas said it is important to understand how important those products are to a particular agency. Some of the content they have developed is critical to DOD, but most agencies would prefer to work with NIST MEP and the Centers as partners or on piecemeal arrangements with smaller amounts of money. C. Thomas pointed to the Department of Energy (DOE) as a potentially valuable partner. MEP Centers have worked with them over the years without receiving any funds. R. Ivester said there is a large chunk of money that is in the process of moving from DOD to MEP Centers through outside competitive agreements without going through NIST MEP. Getting money to the Centers so they can provide help to manufacturers is the priority. In some instances, it may make sense for other agencies to offer competitive awards without involving NIST MEP at all.
- K. Rennels said that an important part of the strategic planning process is ensuring they are highlighting the programs that have been built that have formed fruitful partnerships.
- L. Taito emphasized the value of the CLT's work to strengthen the MEPNN, particularly their work on governance structure and communications. Their collaborations will greatly improve the quality and delivery of much-needed services, and it is an excellent forum for sharing lessons learned and best practices.

National and State Economic Challenges and Opportunities, Data Trends

Speaker: Dan Berglund, Executive Director, SSTI

Uncertain Economic Future

- Unknown whether the U.S. will experience a V, W or K-shaped recovery.
- Unemployment by the end of 2021:
 - 6.5% per June 2020 Federal Reserve forecast.
 - 5.5% per September 2020 Federal Reserve forecast.
- Unknown whether a vaccine will be effective or distributed rapidly.
- Difficult to get clear measurements.
 - Questions about unemployment measures.
 - How many businesses going out of business and how do they break down by sector/geography?

State and Local Government Importance

- State and local governments amount to approximately 13% of the labor force, one of the largest employers.
- Budget shortfalls of \$555 billion for FY 2020-2022, according to the Center on Budget Policy and Priorities.
- Decreased tax revenue.
 - Income and sales tax.
 - Oil/natural gas royalties or taxes.
 - Fuel taxes as a result of less traffic.
- Increase in Medicaid enrollment.
 - More than 10% increase in Kentucky, Minnesota and Nevada.
 - Represented 19.7% of state general fund spending in FY 2019.
- Depletion of rainy day funds.
- Difficulties in talking about state budgets.

- Year-to-year comparisons out the window as tax day moved from April 15 to July 15 in 2020.
- Extra \$600 per week federal unemployment helped keep spending and sales tax from cratering.
- Press reports better than expected revenues, but revenue expectations were developed in April/May at bottom of trough.
- Some states holding off doing updated revenue estimates.
- Some states built budgets assuming Congress would provide funds to states.
- States reliant on funds from natural resources or tourism to fund their budgets will experience significant budget holes.

Higher Education

- Typically a first target of state budget cuts.
- Refunds from spring semester for housing costs.
- Medical systems hit with revenue loss due to cancelled surgical procedures.
- Extra expenses in preparing for in-person instruction.
- Unclear enrollment picture as students take gap years or enroll in cheaper alternatives.

Opportunities for MEP

- Pandemic exposed U.S. dependence on foreign manufacturing in starkest manner possible.
- Pandemic provided opportunities for new dialogue between MEP Centers and policymakers on PPE supply chain.
- Both presidential campaigns have talked about importance of U.S. manufacturing.
- Shift in public attitude toward manufacturing.

Results of Focus Group Word Association for Manufacturing

- In 2015, primarily negative associations with the word manufacturing.
 - China and overseas were common associations.
 - Some mentioned negatives, such as lay-offs, waning and pollution.
- In 2020, virtually all negatives went away, replaced with positives.
 - No reference to China or overseas.
 - Some mentioned jobs or stability.
 - Three negatives remained: obsolete, job outsourcing and monopolies.
- Manufacturing was the 11th most favorable word that people had positive connotations for in a list that included terms such as scientific research, renewable energy and economic development.

Discussion

- M. Newman was pleased to see the positive associations with manufacturing and wanted to explore ways to leverage this change in attitude.
- C. Thomas said that she has received calls from Centers that are connected to universities expressing how nervous they are about these trends. 17 Centers are based in colleges or universities, and nearly all Centers are connected to higher education in some manner.
- M. Magee asked for granular information on industry trends. D. Berglund said he did not have granular information but some early data forecast 10-20% of manufacturers could go out of business. More work is needed to assess whether that will actually happen. The Census Bureau is expected to rerun its pulse survey to collect data from households and businesses which should provide a better understanding of the current situation.

- J. Anaya said a recent briefing relayed that over 90% of the businesses that closed in the Los Angeles area were in the food service, hospitality and entertainment industries. D. Berglund said the data definitely indicates that these are the businesses being impacted the most. He views the “things will never be the same” sentiment with great skepticism, but it is a question of how long the recovery will take. We do not yet have a complete picture of what the impact on the manufacturing sector has been.

Exploring Future Themes – NIST MEP Competitive Awards Program’s Notice of Funding Opportunity (NOFO) Discussion

Speaker: Michael Wilson, NIST MEP Strategic Competitions Group Competition Manager

Background

- Established under statutory authority (15 U.S.C. Section 278k-1).
- Provides MEP Centers additional resources to add capabilities to the MEP Program.
- Established in consultation with the MEP Director, the MEP Advisory Board, other federal agencies and SMMs.
- Published NOFO April 17, 2017.
- Themes for the NOFO derived from SMMs’ input.
 - New manufacturing technologies/Industry 4.0.
 - Supply chain management technologies/practices.
 - Workforce intermediary and business services.
- 29 awards made to date (FY 2017 through FY 2020), with themes including:
 - Medical device accreditation.
 - Industry 4.0.
 - Food manufacturing.
 - Digital manufacturing.
 - Workforce planning.
 - Toyota Kata.
 - Apprenticeship.
 - Cybersecurity.
 - Integration of SMMs into local and regional innovation ecosystems.

FY 2021 CAP NOFO

- Goal: To publish a new CAP NOFO no later than the end of the first quarter of FY 2021.
- Will incorporate new themes.
- Will include input from MEP Advisory Board, other federal agencies, client survey data from FY 2017-2019, independent surveys conducted by Centers and information obtained from recent manufacturing roundtables.

FY 2021 CAP NOFO Themes

- Things to consider:
 - Relevance of previous themes.
 - Activities supported through previous awards.
 - Challenges to manufacturers.
 - Technologies and/or business models.
- Board input to date:
 - Supply chain resiliency beta test program.
 - Artificial intelligence application to continuous process/chemical process industry.
 - Onshoring/supply chain efforts.

- Workforce development (capturing knowledge from people exiting workforce, reskilling of displaced/unemployed workers).

Discussion

- J. Wright asked about recent trends in the last year for awards and how the COVID-19 environment affected the program. C. Thomas said the program and manufacturers had to pivot to doing things virtually. This caused some delays, but the interruptions were not as bad as expected.
- M. Isbister asked about the response rate from the national institutes' NOFOs and what the process was for determining which were successful. M. Pacelli said the NOFO for the national institutes was separate from NIST MEP's. The CAP projects M. Wilson was presenting on were the ones run specifically for the MEP Centers. NIST MEP recently awarded 12 new projects out of about 15 applications. It was a competitive process, initially scored by non-MEP reviewers. NIST MEP typically awards around 75% of the applications they receive each year. M. Isbister said that the three leading subject areas (Industry 4.0, supply chain management and workforce) are even more relevant today than they were in 2017.
- M. Newman said DOE is investing \$18 billion a year in research and development and discussed their work on improving efficiency and lowering costs for solar panels. After tax dollars were spent to develop these technologies, the intellectual property was then offshored. There is increased interest in reshoring the manufacturing of the new technology coming out of DOE and DOD investment, and it behooves NIST MEP to have those discussions and even beta test it. Driving down costs of manufacturing a particular item in the U.S. will take time, but it can be done.
- P. Moulton commented on workforce development. Many people in the food/hospitality sector may be looking to move into a new field and training and will be coming from a sector that may not have transferable foundational knowledge, increasing some of the workforce challenges to reskill workers. The challenge becomes more acute as you climb the ladder of skills and knowledge needed. This is a huge opportunity for NIST MEP, and she appreciates the topic staying on the forefront of their consideration.
- L. Byars said that, as an SMM, workforce development is a major challenge right now, particularly capturing the knowledge of people exiting the workforce. Failing to capture this knowledge leads to an increased strain on the people that remain. NOFOs will be important in these areas. There are many ways to take advantage of the programs, but manufacturers need help getting them in place.
- M. Newman suggested combining the two bullets on the supply chain resiliency beta test program and onshoring/supply chain efforts. He requested that NIST MEP frame up what a NOFO would look like for each of the items.
- M. Magee commented on the importance of maintaining consistency and not letting disturbances change NIST MEP's direction. The themes presented were megatrends before COVID and will continue to be after the pandemic is over. There are a large number of manufacturers who just need to pull through and for whom financing will be key. There may be an opportunity for a NOFO to address financing opportunities that could help these manufacturers get through to the other side of the pandemic.

MEP Advisory Board Working Group Updates

Supply Chain Development Working Group

Speakers:

Don Bockoven, MEP Advisory Board

Dave Stieren, NIST MEP Division Chief for Extension Services

Committee Members

- Board Leader:
 - Don Bockoven
- Board Members:
 - LaDon Byars, Mary Isbister, Matt Newman, Chris Weiser
- NIST MEP Support:
 - Rob Ivester, Mark Schmit, Dave Stieren

Working Group Deliverable

- Guidance and perspectives on the MEPNN support and development of manufacturing supply chains with an emphasis on defense suppliers regarding defense industrial base gaps, and expertise on who should be brought into the discussion to provide insight on defense supplier gaps.

Discussion Topics for the Board

- The MEPNN supports DOD supply chains in many areas, highlighted by:
 - Cybersecurity awareness and assistance.
 - Working in defense manufacturing supply chain technology transfer/transition and supply chain development.
- NIST MEP seeks ongoing Board perspectives on these MEPNN focus areas, approaches and challenges – and their alignment with the MEPNN strategic plan. These efforts primarily focus on the MEPNN strategic plan pillar: empowering manufacturers across the nation.

MEPNN National Network Cybersecurity as of September 2020

- MEPNN cybersecurity assistance for small manufacturers continues to develop strong nationwide capabilities.
 - MEP Centers nationwide providing cybersecurity services, participating in MEPNN Cybersecurity Working Group
 - Continues to be spurred by strong DOD partnerships.
 - Continued MEP role with Defense Federal Acquisition Regulation Supplement (DFARS) requirements for defense sector.
 - Emerging MEP Center role with DOD CMMC Program.
 - Continued emphasis on risk management for all manufacturing industries served by MEP Centers.

MEPNN Cybersecurity Progress Summary (as of September 2020)

- Defense contractor cybersecurity implementation still low, but improving.
- 51 MEP Centers active in MEPNN Cybersecurity Working Group.
- 48 out of 51 MEP Centers with cyber practice – all have access to cyber assistance for clients.
- The MEPNN has made significant progress and continues to move forward addressing important needs.

2021 NDAA

- Specifies DOD budget, expenditures, policies for FY 2021.
- House and Senate NDAA bills have passed; final 2021 NDAA in conference.
- MEP mentioned in the Senate bill:
 - Subject to the availability of appropriations, the Secretary of Defense, in consultation with the NIST Director, may award financial assistance to an MEP Center for the purpose of providing cybersecurity services to small manufacturers.

- Financial assistance can be used by a Center to provide small manufacturers with cybersecurity services related to compliance with the DFARS cybersecurity requirements and with the CMMC framework.

DOD CMMC

- CMMC overview.
 - Future DOD acquisitions will include required certification levels for contractors; full implementation planned in 2026.
 - CMMC does not negate DFARS.
 - Centers continuing to provide awareness, assistance to small defense contractors.
- NIST MEP providing guidance to MEP Center approach to serving CMMC needs of clients.
 - Centers serve as trusted advisors to clients to assist with CMMC without providing formal audit or certification functions, as with DFARS.
 - Ongoing relationship with DOD, CMMC accreditation body for policy alignment.
 - Ongoing NIST laboratory interactions for alignment with NIST cybersecurity approaches and policies.

Additional MEP-DOD Tech Transition/Transfer Supply Chain Development

- NavalX/Tech Bridges.
 - Established in February 2019 as innovation acceleration systems for DOD.
 - MEP Centers operating in Tech Bridge states are working with Tech Bridges to engage small U.S. manufacturers.
 - NIST MEP and Office of Naval Research national relationship.
- NIST MEP-Naval Sea Systems Command Interagency Agreement.
 - Funding MEP Centers to identify/insert leading-edge manufacturing technology into Navy shipbuilding.
 - Initial efforts led by the Virginia MEP Center, working on Ford Class aircraft carrier production at Newport News shipbuilding; discussions underway to expand.
- Defense Manufacturing Communities Support Program.
 - Runs through Office of Economic Adjustment; supports long-term community investments to strengthen national security innovation and expand defense industrial ecosystem capabilities.
 - All six consortia designated by DOD's Office of the Secretary of Defense in 2020 involve active MEP Center participation. MEP Centers involved include Alabama, California, Connecticut, Ohio, Pennsylvania and Utah.

Discussion

- J. Wright asked if the CMMC certification process would be similar to ISO certification, where a third party does certifications. D. Stieren said ISO is a great analogy. Centers help companies understand ISO requirements and implement them within their organizations, and then a third party provides the certification. This is the plan that is being rolled out by CMMC now. Full implementation of CMMC is expected to be in the 2025 timeframe. J. Wright asked why implementation is so far out, given the importance of cybersecurity, and if they will rely on DFARS in the interim. D. Stieren said they will rely on DFARS in the interim. They expect to achieve full implementation by 2025, but pilot projects are ongoing. 2025 is a reasonable amount of time for DOD to put in place the needed infrastructure across their entire acquisition space.
- J. Anaya commended NIST MEP for doing this. He has been watching what CMTC is doing in California in helping smaller DOD suppliers get ready for CMMC, and this is sorely needed. D. Stieren said the Centers are very on top of this topic and its latest developments.

MEP National Network Strategic Plan 2023-2028 Working Group

Speakers:

Kathay Rennels, MEP Advisory Board
Rob Ivester, MEP Deputy Director

Committee Members

- Board Leader:
 - Kathay Rennels
- Board Members:
 - Don Bockoven, Kevin Heller, Mary Isbister, Willie May, Matt Newman, Chris Weiser, Jim Wright
- Ex-officio Support:
 - Bernadine Hawes
- NIST MEP Support:
 - Cheryl Gendron, Rob Ivester, Wiza Lequin

Working Group Deliverable

- To provide long-term program direction, guidance and perspectives for the MEP National Network Strategic Plan for 2023-2028. The working group will consider feedback from Centers, stakeholder partners, management and staff as the plan is developed.

MEPNN 2017-2022 Strategic Plan Goals

- Empower manufacturers.
- Champion manufacturing.
- Leverage partnerships.
- Transform the Network.

MEPNN Strategic Plan Relationship to MEP Headquarters Operational Plan

- Every member of the MEP headquarters team has a performance plan with embedded deliverables and accountabilities.
- NIST MEP is working hard to update and clarify how the things they are doing drive progress and flow up into the four strategic plan goals.
- The MEP headquarters operational plan will encapsulate what they are doing as a collection of divisions and employees and how it contributes to overall progress to ensure they are investing their time in a way that maximizes our impact for the MEPNN strategy.
- A draft operational plan is expected to be delivered in FY 2021.
- As they build out the MEP headquarters operational plan it will be critical to connect with key stakeholders and stitch together a broader operational plan.

Discussion Topics for the Board

- Where are we?
 - Metrics used to measure progress drive behavior throughout the MEPNN.
- Where are we going?
 - The 2017-2022 strategic plan serves to guide our current direction, and the 2023-2028 strategic plan will guide us moving forward.
- The four pillars.
 - Empower Manufacturers, Champion Manufacturing, Leverage Partnerships and Transform the Network – provide structure for the current plan.

- The plan guides primary and supporting roles and specific actions within the NIST MEP office, within the Centers and with key stakeholders, including the MEP Advisory Board and local Center boards.
- For each of these, where are our opportunities to improve?

Discussion

- M. Isbister said that not enough manufacturers know that there are MEP Centers available to assist them, not just in their state but that the entire National Network is available to SMMs. One area for improvement would be to become better known and leveraged by manufacturers.
- L. Taito said the work that has been done since the last MAB meeting has been very systematic and tied to the strategic plan goals. Focusing on what is working well in specific areas and spreading those lessons across the country will enhance the ability to get more recognition. Special project funding is very important in allowing two or three smaller Centers to beta test projects and try out new approaches. She strongly encouraged work in finding out how to roll out and deploy more pilot projects.

Executive Committee Working Group

Speakers:

Mary Isbister, MEP Advisory Board Vice Chair

Cheryl Gendron, NIST MEP Advisory Board Liaison and Designated Federal Officer, MEP Advisory Board

Committee Members

- Board Leadership:
 - Mary Isbister
- Board Members:
 - Mitch Magee, Pat Moulton, Matt Newman, George Spottswood
- NIST MEP Support:
 - Cheryl Gendron, Wiza Lequin, Carroll Thomas, Phill Wadsworth

Working Group Deliverable

- Provide guidance on future MEP Advisory Board leadership and membership recruitment, provide insights into cultivating strong Board governance as well as explore ways to expand the MEP Advisory Board's role in regard to the local MEP Center boards.

Discussion Topics for the Board

- Center board outreach program.
 - Are there ways to encourage MAB members to be more disciplined and more proactive in their outreach?
 - The working group has explored having a way to track Center contacts to ensure they are happening and as a guide for others to reach out.
 - Center boards really appreciate MAB members' attendance and show of interest in their discussions.
- Succession planning for membership.
 - Many MAB members' terms will expire in 2023.
 - Need to be thinking proactively about who to start recruiting in order to achieve a good mix of perspectives (industries, geographies, etc.).
 - This is closely tied to Center outreach efforts, there is a whole group of people who have expressed an interest in MEP that may be potential MAB members.

- NIST MEP staff are available to support the MAB; are there things we can do to better support the Board?

Discussion

- K. Rennels said there is an opportunity as they move forward with the strategic plan, in building the visibility of the MEPNN with a whole new group of people coming in either restructuring or rebuilding their business. Colorado's MEP Center is working with the state on how to structure employee-owned businesses. This will be coming up more and more and will provide enormous opportunities to talk about the MEPNN and their leadership.
- M. Newman encouraged members to send additional ideas on the discussion topics to the MAB Chair and Vice Chair, as well as C. Thomas, R. Ivester and C. Gendron.

Wrap-Up/Public Comments

Public Comments

- B. Zider said Centers have had to pivot internally to deliver services virtually and it is important to capture some of the knowledge gained in the last few months so that the Centers are building a learning management system to help onboard people more efficiently.

Concluding Comments

- K. Rennels said her word for the meeting and for the Board is "intentionality."
- L. Taito applauded the efforts of the Centers and how they have continued to find new ways to serve manufacturers.
- G. Spottswood said MEP has helped sustain and grow millions of much-needed manufacturing jobs and has pushed manufacturers to be the best they can be, which plays a major role in moving the country forward.
- J. Wright gave kudos to C. Thomas, W. Copan and the leadership team for managing in these unprecedented times.
- L. Byars thanked everyone on behalf of small manufacturers for the critical assistance NIST MEP and the Centers provide.
- M. Magee said the pandemic has provided an opportunity to measure what is truly important. It is an opportunity for manufacturing to emerge better, stronger and faster.
- J. Anaya said he is grateful for being part of MEP and for all the work they do in helping manufacturers recover from recent economic hardships.
- M. Isbister congratulated C. Thomas on her leadership in making the MEP something to be proud of today.
- M. Newman said his work on the MAB is always humbling and he is honored to serve alongside such knowledgeable and talented Board members and NIST MEP staff.
- M. Bahar said that it is apparent that manufacturing is a calling for the MAB members and she could not thank them enough for their contributions and their passion.
- R. Ivester said he is looking at the opportunities ahead as highly inspirational. These times are challenging, but a tremendous opportunity for America to do better for manufacturing.
- C. Thomas described how much the MAB has meant to her and the tremendous difference the MAB has made in the past five years working with NIST MEP, the Centers and the Center boards. Everyone has their own leadership style, but what is more important is the passion that they bring to improving manufacturing. If the MAB is open to new styles of leadership in the coming years, they will continue to see good things happen.

Next Meeting

The next Advisory Board Meeting is planned for late February or early March 2021, either held virtually or in-person in Gaithersburg, Maryland.

Adjournment

With no further business, M. Newman adjourned the meeting at 5 p.m.