

**National Institute of Standards and Technology
Manufacturing Extension Partnership
Advisory Board
Minutes of the April 30, 2017 Meeting**

Background

The Department of Commerce (DOC), National Institute of Standards and Technology (NIST), Manufacturing Extension Partnership (MEP) Advisory Board met in an open session from 9:00 a.m. to 4:30 p.m. on April 30, 2017 at the Hyatt Regency Denver at Colorado Convention Center, 650 15th Street, Denver, CO. Approximately 62 attendees, composed of Advisory Board members, NIST and MEP participants, and observers, attended the meeting. Carroll Thomas, Director of MEP, is the Designated Federal Officer for the MEP Advisory Board.

Attendees

Board Members

Jose Anaya, Dean of Community Advancement, El Camino College
LaDon Byars, President and CEO, Colonial Diversified Polymer Products, LLC
Carolyn Cason, Professor Emerita, The University of Texas at Arlington
Joe Eddy, President and CEO, Eagle Manufacturing
Gary Groleau, Corporate Manager of Labor Relations and Organizational Development, New Hampshire Ball Bearings
Eileen Guarino, President and COO, Greno Industries
Bernadine Hawes, Senior Research Analyst, Community Marketing Concepts
Mary Isbister, President, GenMet Corporation
Tommy Lee, President, Vulcan, Inc.
Mitch Magee, Director of Engineering, PPG Architectural Coatings
Matt Newman, Director of Business Management, Covanta
Kathay Rennels, Associate Vice President for Engagement, Colorado State University
Vickie Wessel, Chair, NIST MEP Advisory Board, and Founder and President, Spirit Electronics, Inc.
Ed Wolbert, President, Transco Products, Inc.
Jim Wright, Vice-President of Operations, Proof Research

Guest Presenter

Lisë Stewart, EisnerAmper LLP

NIST MEP Presenters

Carroll Thomas, Director, NIST MEP and Designated Federal Officer
Dr. Phil Singerman, NIST Associate Director for Innovation and Industry Services
Dr. Dave Cranmer, Deputy Director, NIST MEP
Cheryl Gendron, Advisory Board Liaison, NIST MEP
Mary Ann Pacelli, NIST MEP
Dave Stieren, NIST MEP
Gary Thompson, NIST MEP
Tab Wilkins, NIST MEP

Observers

Vic Ahmed, Manufacturer's Edge
Gustave Anderson, WY MEP
Buckley Brinkman, WCMP
Kelly Buchanan, Foundation for Manufacturing Excellence
Tom Bugnitz, Manufacturer's Edge
Brian Burney, Manufacturer's Edge
Monica Clausen, NIST MEP
Mike Coast, MMTC
Bob Comer, Manufacturer's Edge
Christian Cowan, Polaris MEP
Dan Curtis, Arkansas Manufacturing Solutions
Emily Davis, BoardSource
Samantha Fijacko, ASME
Paddy Fleming, Montana Manufacturing Extension Center
Tamea Franco, GENEDGE ALLIANCE
Jennifer Hagan-Dier, TN MEP
Ethan Karp, MAGNET
John Killam, MassMEP
Ned Hill, OH MEP
Wiza Lequin, NIST MEP
Chancy Lyford, NIST MEP
Dan Manetta, PA MEP
Steve McManus, RTI
Mike Nagle, NE MEP
Jon Palmisano, Polaris MEP
Kari Reidy, NIST MEP
Larry Robinson, ME MEP
Pete Rosenkrands, MMTC
Gene Russell, Manex
George Spottswood, CEO, Quality Filters
Michael Stone, Stone and Associates
Rustyn Stoops, DE MEP
Marlon Walker, NIST MEP
David Walrath, WY MEP
Mark Weitz, Kennon Products
Charles Yancey, retired

Welcome, Introductions, and Opening Remarks

Speakers: Vickie Wessel, Chair, NIST MEP Advisory Board, Dr. Phil Singerman, Associate Director for Innovation and Industry Services, NIST, and Carroll Thomas, Director, NIST MEP

Ms. Wessel called the meeting to order at approximately 9:00 a.m. She made introductory remarks and asked other Board members and meeting participants to introduce themselves.

Dr. Singerman thanked everyone for attending, particularly the members of the local boards. The real strength of the MEP program is the 600+ center advisory board members and 1,300+ experts involved with the local Centers. The American Innovation and Competitiveness Act, which was passed in December 2016, reauthorizes MEP and contains significant reforms, including the enlargement of the Board to allow for a wider diversity of expertise.

Ms. Thomas announced that Jeff Wilcox and Bernadine Hawes will be the Advisory Board's new Chair and Vice Chair respectively, beginning in May 2017 and she introduced the seven Advisory Board members that have joined since the last meeting: George Spottswood (pending), LaDon Byers, Matt Newman, Gary Groleau, Mary Isbister, Joe Eddy, Jim Wright, and Mitch Magee. Chris Weiser from Arkansas also joined the Board, but was unable to make it due to weather related issues. Ms. Thomas expressed her appreciation to the four members transitioning off the Board. These departing members - Ed Wolbert, Tommy Lee, Eileen Guarino, and Vickie Wessel - each said a few words about their time on the Board. Ms. Thomas thanked the Center Directors and Dr. Singerman for helping her to assemble the best Board members possible.

Board Assessments

Speaker: Lisë Stewart, EisnerAmper LLP

Ms. Stewart spoke about the board assessment process as an aspect of strengthening local board governance. She shared the results of surveys and conversations she has had with many of the local board members.

Results of BoardSource Surveys

- Participation from 11 Centers, 158 surveys distributed, 137 complete (89.7% response rate)
- 4 key areas scored:
 - setting direction
 - ensure resources
 - provide oversight
 - board structure and operations
- What is working well?
 - Board meetings are effective and more strategic than they used to be. Well-run and valuable.
 - Chief Executive oversight: High level of trust and belief in the effectiveness of Center Directors
 - Financial oversight: Boards feel very comfortable with the level of financial information that is shared with them from the Centers.
- Areas for improvement:
 - Board composition
 - more manufacturers needed on boards
 - more gender and racial diversity
 - Funding and public image

- more people need to be aware of MEP and understand the value the program adds
 - concerns over stable funding due to being relatively unknown
 - Program oversight
 - better understanding needed of actual products and services
 - better understanding needed of the program's impact on manufacturers
 - desire to know how to do a better job and be more strategic in their service
- Observations:
 - Board members want to know how they can do a better job, be better external advocates, understand what manufacturers need, understand programs and services, and understand the expectations in regard to securing funding.
 - Being a better board. More attention needs to be paid to orientation and ongoing development. The level of engagement of all board members needs to be improved - boards should be energetic and meet changing expectations. Boards would like to be more knowledgeable and involved in strategic planning. Boards need to undertake more self-evaluation and review.
 - Being a better resource. Boards need to understand their role in providing feedback to the Center Director/CEO. Boards need more diversity, including emerging industries, small, and large businesses. Boards need to play an active role in raising the profile/brand image of the Center Boards. Boards need to ensure they are paying attention to the financial management of the program and strategic needs while avoiding operational issues.
- Recommendations:
 - Continue to support the orientation process and provide opportunities for new board members to learn about the program and other Centers
 - Provide examples of effective materials for orientation, self-evaluation, meeting management and other best practices
 - Encourage Centers to provide more opportunities for internal and field staff to engage with the boards
 - Explore ways to provide board members with research, access to subject matter experts and shared institutional knowledge to inform strategy development and support the Learning Organization concept

Discussion:

Ms. Stewart asked for suggestions on how technology can be used to better serve boards. Participants responded that some centers are using webinars or sending out preparatory materials and making sure members are getting the NIST MEP E-Blast, though this does put an additional burden on board chairs. Some centers are breaking up into task forces to address specific issues and some are engaging subject matter experts. Some boards are responsible for the Center's strategic plan. Ms. Stewart encouraged boards to focus on key objectives that they would like to achieve apart from the Center's strategic objectives.

MEP Advisory Board/Center Advisory Board Discussions

Local boards and the national Board engaged in dialogues on workforce, technology acceleration, and MEP as a learning organization. The following is the report-backs from the breakout sessions.

Learning Organization

Speaker: Vickie Wessel

Leveraging NIST MEP as a learning organization and developing their capabilities.

- Needs:
 - Survey what capabilities are available and keeping the database updated

- How to deal with cross-cutting issues
- Identifying emerging needs
- Tools:
 - MEP-University (MEPU)
 - MEP Connect - good as a repository but not as a learning portal
 - An app that allows users to feed input into the system
 - Networking of Center Directors
 - to develop a culture of sharing
 - incentivize Centers to share the materials they have available
 - creating list of which Centers are best in key areas
 - Benchmarking and cross-pollinating with organization like NAM
- Vision statement and voice
 - Make known what assets are available and how easy the tools are to use

Technology Acceleration

Speaker: Bernadine Hawes

Technology acceleration is much larger than just tech transfer and should be defined by whatever Centers think their client base needs. There is a large divide between companies that are comfortable with technology and those that are not. The Centers need to work on how to bridge that divide.

- Recommendations:
 - Connecting Centers that are employing technology effectively with those that are not
 - If MEP underwrites some of the costs, Centers can reduce the cost to clients who will get a better margin, making the adoption of technology more likely
 - Working more closely with National Labs
 - Working in the blogosphere (beyond MEP Connect)
 - Demonstrating specific technologies

Workforce

Speaker: Mary Ann Pacelli

Three major workforce issues and how MEP Centers can assist:

- Future workforce pipeline
 - Working with middle schools and high schools to encourage youth to consider a career in manufacturing
- Getting the right people in the door
 - Helping with assessments
 - Convening and cooperating with State Manufacturing Associations
 - Continue engaging with the educational system communicating the needs of manufacturing
 - Where do we find funding for student boot camps and curriculum?
- Retention
 - MEP reviewing the interview and assessment processes
 - Knowledge capture and knowledge transfer
 - Creating ways for programs to share their knowledge more consistently

Discussion:

Ms. Thomas said that NIST MEP is exploring ways to better connect with the Centers and how to connect the Centers with each other. NIST MEP has discussed assigning groups of Centers and their boards to two or three Advisory Board members to focus on working with each other. Mr. Thompson (NIST MEP) said that provided opportunities and resources for strengthening local board governance, without being

prescriptive, has been a successful approach. About 38 out of the 51 Centers are early adopters of the support available; this support includes assistance with self-assessments, action planning, and training for new or reconstituted boards. There is additional room in the budget for more Centers to partake of this assistance and those interested should contact Gary Thompson, Tab Wilkins, Wiza Lequin, Mike Stone, or Lisë Stewart.

MEP Strategic Plan 2017-2022

Speaker: Vickie Wessel, Chair, MEP Advisory Board

Ms. Wessel presented the work of the Strategic Planning Committee updating the MEP's strategic plan, which is intended to clearly define the shared beliefs, values, direction, and envisioned future for MEP. The Board discussed the proposed goals, objectives, and strategies for the plan and how to measure the success of each objective.

Issues Raised:

- Could the proposed strategies be more succinct?
 - Members supported the changes and felt it was more on target in communicating the mission.
 - The plan is not addressed to end users but to the Centers as they produce delivery models for their customers.
- Vision Statement: The Subcommittee added a vision statement to the mission statement. The vision statement as drafted by the subcommittee reads: "In the next four years, the MEP National Network is changing the way the world defines manufacturing and, in doing so, is ensuring U.S. manufacturing is always ahead of global manufacturing trends and leading in advanced manufacturing innovations."
 - Add "enabling or enhancing overall business resilience."
 - Change "define" to "recognize" to avoid sounding like the U.S. just wants to take the lead by moving the bar.
 - The three critical items that need to be included:
 - ensuring U.S. manufacturing is always ahead of global manufacturing trends;
 - leading in enhanced manufacturing innovation; and
 - enhancing the manufacturing resiliency of the U.S.
 - A vision statement must go beyond four years.
 - Should include a definition of "resilience" in the context of what MEP hopes to achieve.
- General:
 - The system needs an intelligence function in looking at technological change, either reacting to it or helping to shape it.
- Discussion of Goals and supporting language of the Strategic Plan:
 - Goal One:
 - Objective 1., Strategy 1.
 - Clarify "enhancing client delivery performance." The intention is to define "client delivery" as MEP's delivery to the Centers, not the Centers to the clients and ultimately customers. This does not match the mission and the vision which are focused on changing manufacturing
 - The Board wanted to confirm whether the focus of the strategic plan is to help determine what tools NIST MEP will need to develop to help the Centers.
 - Objective 2.

- The term “technology” can mean many different things. MEP should clarify this and perhaps have another strategy on how MEP gets information.
 - Ms. Thomas said this may lead to a strategy that builds a consistent understanding amongst Centers about technology and what MEP is doing.
 - Dr. Cranmer said that what technology is new to you depends on the situation you’re in, which makes putting a definition on it difficult.
 - The strategy is more overarching than the objective; the objective and the strategy should be reversed.
 - Goal Two:
 - Members approved of the proposed changes.
 - Goal Three:
 - Objective 1.
 - Get the language right so that it is encouraging state partners to engage their board and their affiliates in their activities.
 - Ms. Wessel discussed making this part of their service agreements.
 - How to do this without being prescriptive? Some sub-recipients may not be aware that they are members of the MEP.
 - Objective 2., Strategy 3.
 - Focus on partnering more effectively with federal agencies rather than just more partnerships.
 - Ms. Thomas liked this suggestion because it can be measured.
 - It should be implied that the partners include the national manufacturing associations. Specific federal agencies or other partners should not be included.
 - Perhaps say “provide Centers with flexible and adaptable approaches.”
 - Goal Four:
 - Objective 1. Strategy 3.
 - Should eventually be put in the past tense, the MEPU concept having been implemented.
 - Objective 2.
 - Ms. Wessel asked how to enhance the NIST MEP evaluation system to create a culture that allows for the support of the national network without negatively impacting any Center’s metrics.
 - Define “high-performance national network.”
 - Ms. Thomas said that MEP has developed ten metrics to see what is needed for a high-performance national network; additional metrics will be needed for what the Centers can do to maximize the number of manufacturers they work with, as well as the impact of those Centers.
 - MEP has introduced a performance-based funding opportunity on how to incentivize Centers to be good citizens of the network.
 - Objective 3, Strategy 4 addresses this issue.

Next steps

- The Strategic Planning Committee will refine and enhance the Strategic Plan and present it again at the next Advisory Board meeting.

- Any further suggestions on the goals or how to measure performance would be greatly appreciated.

Connecting User Facilities and Labs with SMMs

Speaker: Bernadine Hawes, MEP Advisory Board

Ms. Hawes discussed MEP-Assisted Technology and Technical Resource (MATTR) and the effort to connect small and medium-sized manufacturers (SMMs) with NIST facilities. She sought guidance from the Board on addressing the following challenges:

- NIST MEP is seeking connections with small manufacturers through MEP Centers that don't always immediately result in revenue generation opportunities for MEP Centers.
 - This provides additional resources from MEP Centers to serve as Trusted Advisors to manufacturers
 - Initial MEP Center interest seems high, but early assistance requests are low
- MATTR assistance models have not yet been formalized with NIST Labs – in terms of thresholds of “free” service.
 - NIST MEP has examined other models, including DOE Small Business Vouchers and NASA Eight Hours Free Small Business Consultation with Center Experts
 - Mr. Stieren (NIST MEP) said there is a mechanism in place for SMMs to submit requests for technical assistance to NIST, but there is not any funding to incentivize the Labs to participate. The Labs and the Centers have shown an interest in this. NIST MEP will connect Centers, whose clients have measurement or standards-related issues, with the appropriate NIST Lab resources.

Discussion

Ms. Cason (Advisory Board) cited Space.com as a model NIST Labs could consider for business development. Ms. Thomas said MEP is trying to act as a conduit between needs and what the NIST Labs offer, and requested any other models of agencies doing this. Mr. Karp, MAGNET (OH MEP subrecipient), commented that they have had very good interactions with their local NASA center and that having access to their broad expertise can fast-track a SMMs' technology development. Translating what is happening in NIST Labs into something that MEP Centers can utilize is a very complex problem that requires serious understanding of both sides of the equation. It is essential to ensure the successful efforts in this area are being applied to other projects. Dr. Hill (Ohio State University) said trying to do this cheaply or with bots will not work. Ms. Isbister (Advisory Board) suggested NIST Labs present what they are working on to manufacturers in a science fair. Ms. Rennels (Advisory Board) said incentives need to be offered to get scientists to engage in these efforts. Mr. Stieren responded they're considering including engagement as part of the scientists' performance plans. This has been well-received because the scientists want their work to be impactful and they see the enormous market intelligence they can use to improve their own research. Putting in place a system where researchers can query NIST MEP's system with questions they have about manufacturer's needs would be a bilateral value-add.

Ms. Hawes discussed the Embedding MEP into the Manufacturing USA Institutes

- Transitioning individual project learnings and results into National-level capacity and service offerings for the MEP National Network will prove challenging
- Develop a high-functioning network on a National scale among the MEP National Network and the Institutes will also prove to be challenging (due in part to MEP Center tendencies to think and act locally)

Discussion

Ms. Hawes said MEP has tried to connect to DOE labs in the past and it was very difficult. This new program serves to overcome the past challenges. Mr. Stieren explained MEP has made nine awards thus far to embed NIST MEP Center personnel in residence at Manufacturing USA Institutes. They will become experts in the field and understand what the Institutes are doing, then convey that to the small manufacturer clients to develop service delivery offerings that Centers can provide to SMMs, as well as business models. A notice of funding opportunity has been issued for five new grants. National branding will be an essential step towards creating a cohesive network, making these opportunities much more valuable.

MEP Learning Organization

Speaker: Carolyn Cason, MEP Advisory Board

Ms. Cason provided background on the charge to develop the MEP Learning Organization to create a national framework to enable Centers to focus on and gain access to:

- Best practices
- Knowledge and education designed to enhance Center performance
- Expanded market penetration
- Technology transfer
- Increased client top and bottom line performance

An MEP Learning Organization should address:

- Center-focused learning, including:
 - MEP processes
 - Staff development
 - Strategic planning
 - Coaching
 - HR support, specifically succession planning and recruitment/retention
- Client-focused learning, including:
 - New technology
 - Client services – TDMI, Lean, Export, etc.
 - C-level consulting
 - New program development
- Future tech-focused learning, including:
 - Sharing best practices through summits and conferences
 - Working groups
 - Networking platforms (MEP Connect or others)

NIST MEP has pulled many of the needed processes and resources together. Some of these came from MEPU; others need to be developed or may already exist in the Centers. She discussed the draft Statement of Work that has been developed.

Recommended Priorities

- Learning management system
 - Need a technology platform
 - Process to determine what the content should be
 - How to make it available
 - How to sustain it

- Resources – staff, contractors, partners, technology
 - Ongoing for new content
- Network learning
 - Communities of Practice, Working Groups
 - Guidelines for startup and maintenance
 - Resources
 - Evaluations of outcomes
 - Networking
 - Summits/conferences
 - Resources, content, follow-up
 - Evaluations of outcomes

Concurrent Actions Needed

- Systems Learning and Management Group
 - Network learning – Systems Learning and Management Group
 - Define Communities of Practice and Working Groups
 - Start/re-start current Working Groups

Discussion

Ms. Cason sought the Board’s input on the draft Statement of Work (SOW). Ms. Pacelli said a contractor in continual contact with NIST would be necessary to help with the day-to-day activities, which takes pressure off staff and allows for faster purchasing of new content development. Automating the processes for sharing information across Centers would be very valuable. Ms. Wessel asked if what is being proposed is within the scope of the current budget. Ms. Thomas said that NIST has set aside some funds in anticipation of moving forward with the Learning Management System. She appreciates the work that went into the proposal and NIST MEP will need to come back to the Board with their thoughts. Ms. Cason said that the inventory of available assets that was done is a good starting point for determining what resources are currently available. At a minimum, making that accessible across the entire network would be beneficial. Acquiring a platform that can support two-way communication would also help.

In order to develop an effective platform, MEP needs to consider everything they want from it in order to make the right purchase. The Centers should provide input on this. Ms. Wessel asked if the draft SOW has enough of a foundation that it can move forward with implementation and continue to address future needs, or if a committee needs to be organized to identify these needs before it is developed further. Ms. Cason said that will depend on the work being done by Mike Simpson’s (NIST MEP) group. Finding out what the Centers would be willing to pay for would help prioritize what gets accomplished. There are a lot of people looking at future needs and effort needs to be coordinated. Ms. Cason said the financial model around the use and support of the learning platform must be considered as a cooperative endeavor. Mr. Stieren said NIST is using MEP Connect right now until all of these issues are sorted out. Ms. Wessel said it would be helpful to see next steps and an associated timeline.

NIST MEP Advisory Board Governance

Speakers: Vickie Wessel, Tommy Lee, Kathay Rennels, MEP Advisory Board

Annual Report

A draft of the Annual Report was sent to the Board for review prior to the meeting. The Report is due no later than 30 days after the president’s full budget goes to Congress. If members have additional comments, they should get them to MEP by May 15th. Ms. Wessel noted that previous Advisory Board Chair Denny Dotson was listed in the Report; NIST MEP will get that updated. A formatted version with

images, incorporating any Board comments will be sent out to the board for final review. Previous Annual Reports are also available on the NIST MEP website.

MEP Advisory Board 2017 Charter Updates

The Board was given an opportunity to submit comments on the 2017 Draft Charter. None were given at the meeting. Any further suggestions should be submitted to NIST MEP staff no later than May 12th.

By-laws Draft

The Board was given an opportunity to comment on the draft bylaws. None were given at the meeting; however, suggestions can be submitted to NIST MEP at any time.

Ms. Hawes commented on having additional Board meetings via teleconference or webinar. Ms. Thomas said the bylaws allow for additional meetings and meetings to be held via these platforms. Ms. Gendron (NIST MEP) stated meeting as a working group/task force or subcommittee is more flexible than convening a full Board meeting.

Budget and Other Items:

Speaker: Dr. Phillip Singerman

Dr. Singerman provided an update on the budget process for FY17 and FY18, as well as the flexibility and constraints the members of the Board have to speak on behalf of the program. He reviewed the MEP's statutory history. NIST MEP is operating under a continuing resolution with a budget of \$130 million. Congress is working on a full-year CR or omnibus bill which should be completed in mid-May. The Administration released its FY18 budget blueprint proposing a \$1.5 billion cut to the Department of Commerce. The budget proposes eliminating Commerce's grants programs, including MEP. A full budget is expected to be submitted to Congress May 22. More information about the future of the MEP program should be available by June.

Ms. Thomas added that the original sunset provision for MEP was tied to getting technology from the NIST Labs to SMMs, which would in turn provide a royalty to the Centers and make them self-reliant.

Dr. Singerman said as employees of the Executive Branch of the federal government, NIST supports the Administration's Budget. NIST employees cannot lobby Congress or ask anyone to lobby Congress. As a Federal Advisory Committee, the MEP Board cannot lobby Congress, though they can educate them and noted that the Annual Report is an educational document. As individuals, Board members, Center staff and clients are free to exercise their First Amendment rights. Dr. Singerman distributed positive press articles on MEP's work for the Board's review and listed the members of the Senate Appropriations Subcommittees.

Open Items/Future Topics and Subcommittees

Speakers: Vickie Wessel

There were no open items.

Ms. Wessel proposed the establishment of an Executive Committee for the Board going forward to assist in recruitment. The Executive Committee should be headed by the Chair and Vice Chair and would make recommendations to the Board. This should be discussed at the next Board meeting.

Wrap-Up and Public Comments

Speakers: Vickie Wessel, Carroll Thomas, Director, NIST MEP

Board Chair, Ms. Wessel asked for comments on the day's meeting.

- Mr. Lee liked that members were given meeting dates for the next two years. He encouraged members to visit the labs during one of their next meetings. He said it is important for members to speak to members of the Senate or their staff.
- Several members felt the morning session was very useful.
- Mr. Newman asked the departing members to stay in touch and mentor new members.
- Hearing the perspective of Center representatives was helpful.

Concluding Comments

- Ms. Wessel shared her experiences as a Board member, saying addressing the Strategic Plan is a continual necessity. The national Board should be a model for the local boards and should do self-assessments.
- Ms. Wessel commended the leadership of Ms. Thomas and Dr. Singerman and their support for the Advisory Board.

Public Comment

There was no public comment.

Next Meeting

The next Advisory Board Meeting is scheduled for September 26th 2017, at NIST in Gaithersburg, MD.

Adjournment

With no further business, Ms. Wessel adjourned the meeting at 4:36 p.m.