National Institute of Standards and Technology
Manufacturing Extension Partnership
Advisory Board
Minutes of the March 1, 2016 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 10:30 a.m. to 4:00 p.m. on March 1, 2016 at the Ronald Reagan Building & International Trade Center in Washington, DC. Approximately 31 attendees, composed of Advisory Board members, NIST, and MEP participants, guest speakers, and observers, attended the meeting. Carroll Thomas, Director of MEP, is the Designated Federal Officer for the MEP Advisory Board.

Attendees

Board Members
Carolyn Cason, Former Vice President of Research, University of Texas, Arlington
Roy Church, President, Lorain County Community College
Eileen Guarino, President, Greno Industries, Inc.
Bernadine Hawes, Senior Research Analyst, Community Marketing Concepts
Kathay Rennels, Associate Vice President for Engagement, Colorado State University
Vickie Wessel, Chair, NIST MEP Advisory Board, and Founder and President, Spirit Electronics, Inc.
Jeff Wilcox, Vice Chair, NIST MEP Advisory Board, and Vice President for Engineering, Lockheed Martin
Ed Wolbert, President, Transco Products, Inc.

NIST MEP Participants
Zara Brunner, Acting Manager of Communications, NIST MEP
Dave Cranmer, Deputy Director, NIST MEP
Mike Simpson, Director of System Operations, NIST MEP
Phillip Singerman, Associate Director of Innovation & Industry Services, NIST
Carroll Thomas, Director, NIST MEP
Mark Troppe, Director of Partnerships and Program Development, NIST MEP

Observers
Clara Asmail, NIST MEP
David Boulay, IMEC
Samm Bowman, NIST MEP
Kelly Buchanan, Foundation for Manufacturing Excellence
Monica Claussen, NIST MEP
Rachel Pittenger, U.S. Government Accountability Office

Mike Coast, MMTC
Missy Davis, NIST MEP
Matt Fieldman, Ohio MEP
Karen Fite, GaMEP
Carrie Hines, ASMC
Mimi Hsu, Lockheed Martin
Barry Miller, DVIRC
Petra Mitchell, Catalyst Connection
Ben Rand, Insight Consulting
Peter Rosenkrands, MMTC
Dave Stieren, NIST MEP
Ben Vickery, NIST MEP
Phillip Wadsworth, NIST MEP

MEP Board Networking and Distinctive Practice Meeting

MEP National Board- Sharing and Linking the Network
Speakers: Vickie Wessel, Chair, National Advisory Board, and Mike Simpson, Director of System Operations, NIST MEP

The National Advisory Board has been tasked by the Director of NIST to increase connectivity between the MEP Center boards and the National Advisory Board. Advisory Board Chair Vickie Wessel has chaired the subcommittee on Board Governance. The benefits of increasing connectivity include:
- Tapping the significant resource base in Centers
- Ensuring that local board members advocate for local manufacturing
- Addressing the challenges facing small manufacturers at the state level
- Strengthening board governance

Mike Simpson provided an out-brief of the Board Governance subcommittee's charter and activities to date.

MAB Advisory Board Subcommittee Approaches

1. Communication Plan- To expand the communication between the Advisory Board and NIST MEP with the MEP Center boards through:
- Board Orientation
- Regional Board Calls
- Semi Annual Newsletter

2. Distinctive Practice- To expand sharing and learning and to develop MEP's capabilities as a learning organization and high performance system through:
- Quarterly Distinctive Practice Webinar
- MEP Connect Website
- Regional Manager and Board Chair Sharing

3. Board Self-Assessment- To emphasize the critical role the Board plays in the success of an MEP Center. Self-assessment is an efficient way to get input from Board Members on how the Board is performing against generally accepted best practice standards.

Attendees were then asked the following 3 questions to share in a group exercise and the responses are noted below.

1. What 2 or 3 activities/topics would you like to hear about regularly from the MEP Advisory Board (MAB)? (e.g. Status of Subcommittee Project, or Re-competition)?

- Aspirational goals to motivate staff
- Involving millennial generation in MEP activities
- Lean, Agile, Design thinking, latest technology trends
- Increased Advisory Board visibility on requirements, meeting schedules, and outcomes
- Facilitate matching between weak and strong Centers in areas that need help
- Communicate how funds are being deployed
- Advisory Board should communicate national level activities to Centers
- Further explanation behind Center Re-competition
- Communicate information about Small and Medium Sized Enterprises (SMEs)
- Balance between the Center's public mission and consulting responsibilities
- Regularly schedule out Board Summit annually
- Clarification of Advisory Board charter to include goals, expectations, and role as it compares to local boards
- Execution items come from NIST MEP, flows to Center Directors, then local boards
- Advisory Board needs to understand the local issues of Centers and their boards
- Identify different agency funding models and issues
    - Money going to one type of entity
    - Mechanism to reduce silos at local level
- Centers need a refresh of the Strategic Plan regularly
- Set repository for items like FSMA, FARS, DFARS in MEP Connect
- Change date for MEP E-Blast from Friday to Monday
- Include local board chairs on distribution list for various meetings

2. What 2 or 3 items/issues would you like the MEP Advisory Board to represent the Local Boards on during upcoming years? (e.g. Cost Share Changes)?

- Considerable amount of time spent by Centers on survey process with clients
- Data from surveys that generate impacts should be used to influence votes and operational directions both locally and across the MEP system
- Reevaluate survey metrics
- Increase National Advisory Board involvement and communication on Manufacturing Day

- The changing scorecard and performance evaluations makes it hard to review Center performance over time
- Identify the difference between contracts and cooperative agreements and working on these together
- Push for increased funding as well as looking for opportunities and business models to generate revenue that the system can use
- Voice to Congress- identify MEP's biggest advocates and engage with them frequently
- Strategies that connect industry and local boards
- Communication to National Board from local boards on issues

3. Given items 1 and 2 above, what/how is the best way to share/communicate/disseminate information between the MAB and the Local Boards? (e.g. Quarterly Newsletter)

- Push- pull capabilities
- Increase MEP Connect visibility
- Publish events well in advance

Welcome, Introductions, and Opening Remarks

Speaker: Vickie Wessel, Chair, NIST MEP Advisory Board

Ms. Wessel called the meeting to order at approximately 10:30 a.m. and Ms. Wessel made introductory remarks.

Presentations

State of MEP and Director's Update
Speaker: Carroll Thomas, Director, NIST MEP

Carroll Thomas provided introductory remarks, an overview of the FY16 budget, and updates on various MEP activities.

NIST MEP Appropriations History
FY 2014 $128.0M
FY 2015 $130.0M
FY 2016 $130.0M (Actual); $141.0M (Requested)
FY 2017 $142.0M (Requested)

- The current budget falls short $11.0M.
- It is critical that MEP receive the full amount of requested funding in the FY17 budget.

Q: Is it MEP's intent to equalize dollars per manufacturer throughout the system?
A: We looked at the number of manufacturers in an area and at the Centers to see how each are funded. We are looking at the number of manufacturers in their marketplace and bringing

everybody up to a certain level. Approximately 90% of Centers will be in that number of dollars per manufacturer. We don't want to harm Centers that were getting a certain amount, but we need additional funding to level the playing field.

NIST MEP FY 2016 Spend Plan

Total Available Funds $143.4M
- FY2016 $130M appropriation, FY2015 carryover ($9.347M) and prior year recoveries ($4.078M)
- Total available funds are No-year money.
- The amount over $130 includes Round 2 competitions.
- Ohio and Utah were not awarded and funds that are to go to those Centers are included.

Existing MEP Center Renewals $103.7M
- Includes Legacy, Round 1, Round 3 Extension, Round 3 Competition, Round 3's 6 months additional funding, Round 4 Competition
- Legacy Centers- 7 Centers competed in last 3 years, and any extensions that have to be done are included.

Additional MEP Center Funding $8.6M
- Round 2 Competition, Round 3 "rightsizing" Competition Amount

Centralized MEP System Support $9.6M
- Programmatic and Non-programmatic Contracts including surveys
- Cooperative Agreements

NIST MEP (Staff Labor, Benefits, Supplies, Travel, etc.) $10.4M
- Assumes full NIST MEP Staffing
- MEP is 6-8 positions short of full staffing and expects to be fully staffed by the end of the year.

NIST Overhead $5.4M

Total Planned Expenditures $137.8M

Anticipated Carry Over $5.6M
- Current carryover amount is anticipated and subject to change.

- It is important to note the difference between being funded at $141M appropriated and having total funds of $143M from carryover, de-obligated funds, and competition anomalies.
- Total available funds are not MEP's appropriated funding number and must be carefully tracked.

Q: How is it that monies we don't spend for staff are allowed to carryover?
A: Because it is No-year money.

- Recovering de-obligated funds are the result of clear management and a complex process within the Commerce Department.
- $5.0M was de-obligated from prior years of Center awards that were closed out.

- MEP gets a single appropriation that is not broken out into categories and with no distinction between program and overhead.
- Some expenses in centralized MEP support and staff support are not considered overhead and cannot be used to determine true overhead numbers.
- The NIST MEP Director and staff carefully measure expenditures for reporting to Congress.
- Approximately 11-12% of funding is used to run the program and the rest goes out to Centers.
- 90% of Centers should receive approximately $369-437 per manufacturer in their marketplace. 10% will be slightly above that but none below.

FY17 President's Budget for NIST MEP
Complete the Re-Competition of national MEP Centers
- Enhance local flexibility and increase accountability
Provide MEP Centers with greater capability
- Better serve very small, rural, and start-up companies
Expand efforts to transfer federally funded technologies from NIST, labs, and partners
- Better reach smaller manufacturers
- Connect manufacturers with business opportunities

MEP Center Competition Update
State Competition Awards (for the operation of an MEP Center in each State)
Round 4 – FFO Projected release date – Jun 2016
11 States: DE, HI, IA, KS, ME, MS, NM, NV, ND, SC, WY
Round 3 – Active: Released Jan 2016
13 States: AL, AR, CA, GA, LA, MA, MO, MT, OH, PA, PR, UT, VT
Round 2 – Awarded with start dates of Jan 2016
12 States: AK, ID, IL, MN, NJ, NY, OH, OK, UT, WA, WV, WI
Round 1 –Awarded with Start date of July 2015
10 States: CO, CT, IN, MI, NH, NC, OR, TN, TX, V

- No applications in Ohio and Utah
- Anticipated Round 3 awards made by October 1, 2016

Preview of New Federal Funding Opportunity
Embedding MEP in NNMI Institutes

The pilot test approaches to provide technology acceleration assistance to small and mid-sized U.S. manufacturers through the establishment of strong collaborations between the nationwide system of MEP Centers and NNMI Institutes.

The pilot focuses on demonstrating ways to leverage capabilities and reach of the MEP Program to provide assistance to small U.S. manufacturers in technology areas that are the focus of the

NNMI Institutes. These Pilots will embed personnel from MEP Centers in NNMI Institutes to accelerate the transition of technological innovations and manufactured goods.

There will be approximately 7 Pilot Project awards at a level of approximately $300,000 - $600,000 per year for each award (up to 2-year period of performance). Applicants must be established and operating NNMI Institutes and be able to clearly identify the MEP Center or Centers involved. NIST MEP is targeting an FFO release in March 2016 and funding awards made in FY16.

Current Established and Operating Institutes
- America Makes- Ohio
- Digital Manufacturing & Design Innovation Institute DMDII- Illinois
- Lightweight Innovations for Tomorrow (LIFT)- Michigan
- Power America- North Carolina
- Institute for Advanced Composites Manufacturing Innovation (IACMI)- Tennessee
- Flexible Hybrid Electronics- California
- Integrated Photonics Institute for Manufacturing Innovation- New York

Discussion
Q: Does the funding go to the 7 NNMI Centers so they can bid?
A: This is under a NIST cooperative agreement. The NNMIs will propose an MEP Center or Centers. Institutes are regional but are expanding their reach. We are encouraging national and local reach. It would be great for the 7 centers to have 14 MEP people to build a super group. We want them to show it to be sustainable and scalable in their proposal.

Q: Do NNMI Centers have a cost share requirement?
A: Yes, they are public-private partnerships.

Q: Does this count for them as federal money so they have to increase their match?
A: No it won't because you cannot match federal funds with federal funds. This is a separate award.

Q: Have you had an opportunity to map the Institutes onto MEP Centers that have gone through the Re-Competition and see what kind of match there is?
A: We did look at it. That was part of the reason we decided to do this strategically. We looked, for instance, at Ohio and California that are going through competitions right now. The Institutes are right there.

Q: My question is not on the requirements for the MEP Centers to be engaged, but for the other way around- coverage for opportunity across all of the MEPs?
A: One of the things we found with the other federal sponsors, for example PowerAmerica, is that when you look at the SMEs that are operating in the wide bandgap semiconductor space, the SMEs are generally not in North Carolina. With respect to that Center they are looking at identification on a national basis. Not where are manufacturers currently operating in the

technology manufacturing space, but where they could or should be operating. Not just looking at it from a geographical standpoint, but from a strategic national standpoint. We are encouraging that local connection because colocation is very important. We are also seeking to encourage that partnerships are happening on a broader scale to address the kind of issue I just mentioned with PowerAmerica.

Q: When this project was put in place did the NNMIs commit to attempting to work with SMEs? NNMIs tend to work with the largest companies.
A: Yes. Although not a statutory requirement, they understand the importance of it and do it to varying degrees. The Institutes have a business model challenge similar to MEP's challenge in terms of cost share. They have to work with large companies because that is where the cost share is. Economic development is not the focus of the agencies, and although SMEs and workforce were included in the FFOs, when things got worked out that was secondary. We tried to work with Institutes over last several years. This is a creative program that has been well accepted by the Institute directors and program managers. This flows directly from the work of the Board on Technology Acceleration.

Q: What about the Centers that have not completed the Re-Competition? If in the proposal an award goes to another entity, how difficult is it going to be for the successful NNMI to integrate the subrecipient for the new cooperative agreement?
A: What we have seen going through two rounds of competitions is that there is an infrastructure in every state that supports manufacturing in different ways. Whether the current incumbent wins or someone else wins, the structure that is there morphs to who is the lead and partner. We believe they will still be a part of it. Why are all the incumbents winning? We have the MEP program because of this market gap and market failure. There are not a whole lot of organizations going after setting up an MEP Center because you need the infrastructure in place.

Q: How long are the projects for?
A: The operational period is up to two years.

- MEP Centers have worked with NNMIs in the past, and the pilot will enhance those efforts. Traditionally, Centers approach the Institutes and the pilot is attempting to reverse that approach.
- MEP hopes to identify a business model for Centers to work with Institutes going forward an enduring basis.
- Cooperative agreements in place between the Institutes and the DOD or DOE do mention small manufacturers, but the extent varies across the board. The Institutes and funding agencies have an opportunity through MEP to look for impact on a bigger scale.
- The Institutes are purveyors of a set of projects. MEP must be involved at the project level when awards are made.
- Best practices from the pilot should be published to share with the Centers and their boards.

MEP Operations

NIST MEP is undergoing a culture transformation and structural reorganization to allow for increased capabilities and a more engaged staff. Chancy Lyford has been named the MEP Executive Officer and Margaret Phillips has been named the MEP Director of Center Operations. Dave Cranmer has been named the official Deputy Director for MEP.

<u>Future State</u>

MEP Performance and Evaluation Management Value System
Performance Measurement Policy (an input into the decision-making process)
- Based on activity and survey derived impacts on SMEs, taking into account Center diversity and the strategy-specific metrics employed to arrive at net aggregate impacts which will be scaled to differing Center sizes to ensure equitable comparisons.
- Full performance dashboard to include levels, trends and appropriate comparisons.

Performance Management Policy
- Annual (RM, FPO, and others), Panel (Peer), Operating Outcomes (Center reported data) and other information.
- Panels will be peer to peer, advisory to Centers and to the MEP Director with the principal products focusing on actionable feedback reports to Centers.
- The Panel reports will focus on improving Center performance, via diagnostic assessment and performance advice.
- Performance impact measures (levels, trends, and comparisons) will be tracked and reported over time and provide a common basis for linking Annual Review and Panel Review evaluations, thus revealing trends and other insights.
- Panels will not asses Center compliance (that is a NIST MEP responsibility).
- A process for sharing best practices across the system will be instituted.

Discussion
Q: On a peer to peer evaluation who determines who a peer group is?
A: We are still working on that. We are looking at state size, the organization type (501c3, etc.), the marketplace, and the various aspects of a peer to peer group that would be most optimum to provide us with the information they need.

- MEP might benefit from having a fixed number of panelists that come from within a region in addition to floating peers from outside that regional group.
- The foundation of MEP's performance policy is to increase a Center's capabilities by providing assistance with managing their award rather than penalizing them.

<u>Manufacturing Day- Oct 7, 2016</u>
The goal of Manufacturing Day is to have 3,000 registered events and 500,000 participants (especially students). Manufacturing Day sees continued positive trends in a perception survey conducted by Deloitte. NIST MEP and the Advisory Board are requested to help with:
- Recruiting endorsers
- Getting the word out to hosts and students/educators

- Public relations
- Day of participation

Discussion
Q: Is there a way to get national media exposure for the Manufacturing Day event?
A: MEP is working on it with partners. We have a sponsorship package with different levels asking for assistance with that exposure. Paid ads need corporate contribution.

- Many industrywide organizations have an interest in this and organizations that local Center board members belong to are a resource.
- Utilize MEP field staff at the regional level to spread information on Manufacturing Day.

NIST Director's Charge to the MEP Advisory Board
Speaker: Dr. Phillip Singerman, Associate Director of Innovation & Industry Services, NIST

Dr. Singerman provided background on the NIST Director's charge to the Advisory Board from 2013 to address cost share and develop a Strategic Plan for MEP. Cost share was completed by the fall of 2013 and the Strategic Planning process began in the fall of 2014. During the past two years MEP also began its Re-competition, the search for a new Director, and advancing Technology Acceleration.

Mandate of MEP Advisory Board
The MEP Advisory Board is authorized under Section 3003(d) of the American COMPETES Act of 2007 (P.L. 110-69) in accordance with the provisions of the Federal Advisory Committee Act (FACA) of 1972 (P.L.92-463) as amended.

The Advisory Board is appointed by the NIST Director to provide:
Advice on Manufacturing Extension Partnership programs, plans and policies;
Assessments of the soundness of Manufacturing Extension Partnership plans and strategies; and
Assessments of current performance against Manufacturing Extension Partnership program plans

As the primary private sector advisory board for the National Institute of Standards and Technology Hollings Manufacturing Extension Partnership Program (MEP), the Board is best positioned to provide recommendations on several high priority operational and programmatic issues of major importance to MEP. Dr. Singerman has requested that the Board focus on the following areas:

1. Reengaging senior management to provide guidance and advice to create the 2017-2022 Strategic Plan:
- MEP began development of a Strategic Planning process in fall, 2012, and has developed a Strategic Framework which now needs to support the vision that the Director has for the Program.
- Taking the next step of completing a 3-year Strategic Plan will aid in preparing the MEP Program for the next Administration, which will take office in January 2017.

- The Board is requested to provide guidance to the MEP Program on the completion of a system-wide Strategic Planning process that would engage all stakeholders.

2. Guidance on the development of a protocol to connect user facilities, research and technologies at NIST and other federal laboratories with small and medium-sized manufacturers:
- The development of a connection protocol would leverage the benefit that the MEP Program has in being part of the National Institute of Standards and Technology.
- The MEP Program is becoming more engaged in larger original equipment manufacturer supply chains that require smaller manufacturers to use advanced manufacturing production processes that are customizable and secure.
- The Board is requested to provide advice concerning the MEP Program methods to connect NIST resources to the MEP Network for the benefit of U.S. small and medium-sized manufacturers.

3. Recommendations on the establishment of an MEP Learning Organization:
- After the completion of competition in 2017, MEP plans to have the first comprehensive gathering of the Network since 2012 to strengthen connections and reacquaint MEP staff with sharing best practices.
- Working Groups and Communities of Practice will be reestablished and the MEP University will be reborn.
- The Board is requested to provide guidance on the development of an integrated MEP Learning Organization and, in building toward a national meeting in the spring of 2017, the training and development of a network conference.

Discussion
- Jeff Wilcox will continue working with the Technology Acceleration subcommittee.
- Carolyn Cason and Vickie Wessel will be involved in the Strategic Planning effort.
- Cost share change is the number one legislative priority for NIST MEP in 2016.
- Roy Church was thanked for his service as his term ends in May.

Technology Acceleration Subcommittee Final Report-Out
Speakers: Jeff Wilcox, Vice Chair, MEP Advisory Board, and Mark Troppe, Director, Partnerships and Program Development Office, NIST MEP

An overview of the Advisory Board subcommittee on Technology Acceleration (TA) activities and charter were provided.

The Implementation plan was released in May 2015.
Structure of TA Implementation Plan:
- Background
- Work Plan
- Key Findings
- Eleven Recommendations:
  o Setting Priorities

- o Barriers and Incentives
- o Scale-Up and Sustainability

Available at the NIST MEP public site (http://nist.gov/mep/about/advisory-board-meetings.cfm)

ABCTA Recommendations
Setting Priorities

1. NIST MEP should adopt a rubric of agreed-upon criteria for evaluating future Technology Acceleration opportunities, setting priorities, and investing and allocating resources.
Organizational Lead: ABCTA and NIST MEP
Deliverable: Finalized list of criteria
These include:
- aligning with Administration priorities
- aligning with NIST and MEP mission
- tapping core strengths of MEP Centers and the MEP System
- generating high return for low investment of resources
- addressing key SME needs
- identifying ready, willing and able partners

2. MEP should give priority to developing and implementing TA opportunities with NIST labs and NNMI Institutes over the next year, while also pursuing the emerging collaboration with DOE labs.
Organizational Lead: NIST (MEP, Labs and Advanced Manufacturing Program Office) and Centers that are engaging early with Institutes
Deliverable: Listing and descriptions of specific actions engaging MEP with NIST Labs, NNMI Institutes, and DOE Labs.

Execution: Priority to developing and implementing TA opportunities with NIST, NNMI and DOE:
- NIST MEP-DOD MOU including DMDII – MEP Pilot
- DOC-DOE MOU to focus on collaboration with DOE Labs
- NIST MEP-DOE MOU to focus on DOE-funded NNMI Institutes
- Embedding MEP Center Staff in NNMI Institutes FFO
- Technology Acceleration Connector to connect MEP Centers and NIST Labs
- Penn State University Additive Manufacturing Challenge
- DOE Lab Small Business Voucher Pilot
- NIST Engineering Lab-MEP Collaborative Robotics & Flexible Automation Workshop

Barriers and Incentives: Reduce Risk
1. The MEP system should work diligently to enable permanent change in the cost share requirement to 1:1 to reduce Centers' risk of experimenting with Technology Acceleration services.
Organizational Lead: MEP Centers, MEP advocates, partners and stakeholders, not NIST MEP
Deliverable: Legislation that permanently changes the cost share requirement from 2:1 to 1:1.

* EXTERNAL TO NIST MEP STAFF

2. NIST MEP should provide more competitive funding and, when available, supplemental funding, to Centers willing to experiment with Technology Acceleration strategies, tool development, and partner development.
Organizational Lead: NIST MEP advised by the Technology Acceleration Working Group
Deliverable: FFO to provide funds to Centers to develop Technology Acceleration products, services and practice across the system.

Execution: NIST MEP should provide more competitive funding and, when available, supplemental funding, to Centers willing to experiment with Technology Acceleration Embedding MEP Center Staff in NNMI Institutes FFO.
- NIST MEP State Competition FFOs- language included around TA awareness in SMEs
- Technology Collaboratives- use Technology Driven Market Intelligence (TDMI) process of applying it to grow and develop an innovation ecosystem
- Penn State University Additive Manufacturing Challenge
- Technology Acceleration Working Group (Committee on Scale-Up and Sustainability)

Q: Do you have material on the 5 collaboratives you are working on setting up?
A: We have material on 4 existing collaboratives and those materials can be provided to the Board. We have developed charters and they are in the formative stages. There is also an insert in the Advisory Board's meeting package that includes a description of each point. That effort is being funded by another division within NIST and unaffiliated with MEP directly- the Technology Transfer Office.

Barriers and Incentives: Professional Development / System Learning
1. Develop an 18-month systematic plan for system learning across the MEP system that would include education on new technologies, their implications, and Technology Acceleration strategies employed by Centers.
Organizational Lead: NIST MEP P-PDO working with System Operations team
Deliverable: A plan for system learning through Fall 2016.
Execution:
- Work underway in the Technology Acceleration Working Group
- Working in concert with MEP System Operations Division and Workforce Working Group
- TA Professional Development / Systems Learning plan to serve as pilot for NIST MEP Systems Learning Strategy

2. Launch a Technology Acceleration Working Group to encourage peer-to-peer learning and build relationships that strengthen the network.
Organizational Lead: NIST MEP Partnership and Program Development team and the Center Leadership Team for the ABCTA
Deliverable: A charter and initial membership roster for the working group along with a plan of proposed activities for the first year.

Technology Acceleration Working Group (TAWG) Charter
Execution: Launch a Technology Acceleration Working Group to encourage peer-to-peer learning and build relationships that strengthen the network.

3 TAWG Committees:
- System Learning (Dan Curtis, AMS & Karen Fite, GA MEP: Clara Asmail staffing)
- Scale-up (Ron Lehman, TMAC & Jim Watson, CMTC: Ben Vickery staffing)
- Metrics (Paul Jennings, TN MEP & Peter Russo, MA MEP: Gary Thompson staffing)

In-person TAWG meeting 11/15 Atlanta
Next In-person TAWG Meeting in conjunction with May MEP Update Meeting

Barriers and Incentives: Performance Measures
1. Review MEP Center performance measures to explore quantitative and qualitative options for capturing impacts or other ways for acknowledging Centers' work as they engage in TA activities.
2. As the MEP performance measures seek to increase Centers' ability to articulate their own metrics, work with Centers to encourage and assist in developing useful metrics for TA activities.

ABCTA Recommendations
Execution: Metrics Committee: Next Steps for TA Metrics document produced and refined, focus on Engaging 2.0 MEP Centers via Operational Plans.

Scale-Up and Sustainability
1. NIST MEP should work with Centers to consider formal options for how to best stay informed about the growing number of cross-cutting technologies and emerging opportunities in order to fully engage and leverage the value of the MEP Centers.
Organizational Lead: NIST MEP working with the Technology Acceleration Working Group
Deliverable: A plan for designating staff and/or Centers as expert resources in individual emerging technologies. The plan should take advantage of existing relationships and expertise and seek to disseminate that across the system as appropriate.

ABCTA Recommendations
Execution: NIST MEP should work with Centers to consider formal options for how to best stay informed about the growing number of cross-cutting technologies and emerging opportunities.

Work underway in the Technology Acceleration Working Group (Committee on Scale-up and Sustainability):
- Embedding MEP Center Staff in NNMI Institutes FFO
- DOC-DOE MOU to focus on collaboration with DOE Labs
- DOC-DOE MOU to focus on DOE-funded NNMI Institutes
- Technology Acceleration Connector to connect MEP Centers and NIST Labs
- Technology Collaboratives

Discussion

Penn State University Additive Manufacturing Challenge
- Open until March 29
- $200K will be awarded to each recipient that demonstrates a concept using additive technologies.

DOE Energy Efficiency & Renewable Energy (EERE) State Workshops/ Bootcamp
- Fall of 2016
- Provides a way to penetrate states without DOE presence and bring understanding to constituents in those areas.

Q: Much of the technology under development in the labs is funded by various agencies. At what point is a developing technology determined to be available for tech transfer? Will MEP be the only conduit available for tech transfer so there are not competing entities?
A: There is a lot of work to be done but we do not have a problem with turf. Together, agencies are supporting the missions. A lot of investments are made by HHS. Likewise for DOD-funded technologies, and other intermediaries. Our niche will be in those technologies that help in product development or in making a product. We are all about partnerships, so if there is an opportunity to get leverage from another entity we are going take advantage of it.

Q: How do you facilitate multiagency involvement with SMEs to prevent duplicative efforts? How do you determine who the recipient of that technology will be?
A: You can divide it into two worlds- finite technologies and infrastructural technologies. Infrastructural ones are going be broad based and probably every Center can get involved in helping SMEs access those capabilities. Finite technologies will benefit from intellectual property protection. That will be transaction-based and it will be up to the owner. We can make partnerships with those owners and through those partnerships MEP can be brought in to facilitate product commercialization. The NNMI role is technology commercialization/product development- no competition. Labs are different - there are competing activities.

Q: There is communicating the message out to vendors and companies but is there a missing link communicating MEP back inward. How do you communicate back into the labs to make sure different entities know of the value of the MEP program?
A: We are looking at how to put a process in place to identify opportunities coming from many sources in a pipeline that can be fanned out and supported to a successful resolution. Each lab is complex and there are still a lot of places within the labs that we need to communicate with. MEP is getting ready to hire two new regional managers and we are planning on building into their orientation process a structured relationship development experience with NIST labs. We will be talking with lab directors about deepening the relationship to identify lab activities that fit with the MEP mission.

National Board Governance Subcommittee Final Report-Out
Speakers: Vickie Wessel, Chair, MEP Advisory Board, and Mike Simpson, Director, System Operations, NIST MEP

The Board Governance subcommittee will compile and disseminate a summary document of the information collected at the group exercise from the Board Networking and Distinctive Practice Meeting held on the morning of the Advisory Board Meeting.

Discussion
Q: Many of the Centers have subrecipients and they are the ones working with the manufacturers. Have we thought through how to bridge the Centers to the subrecipients?
A: In going through the proposals we are looking at that closely and how the structure is set up with their subrecipients. Our relationship is directly with the proposer. A major focus of the competition is on what happens at the subrecipient level, at what the host is doing, and their proposed partners. In looking at some of the metrics, part of it is capturing what type of structure they have and evaluating the effectiveness of that structure.

Q: Is there a way to establish expectations that the subrecipients would be directly connected to NIST MEP as well as the Center Directors?
A: We are looking at that in terms of evaluating the proposals. Legally the host is responsible to NIST MEP, and if they are not managing the subrecipient we have reach there, but we cannot get into contractual interference.

- Subrecipients may participate at NIST MEP meetings and conferences.
- Clarify the role and objectives of National Advisory Board for Centers and their local boards, how it relates to them, how to communicate what the system needs, and how the Advisory Board is advocating for Centers with Congress.
- Board members would like more conversations about running Centers.
- Identify how to best continue the dialogue through regional calls, Center Director and board orientation, and peer council networks.
- Last minute changes need to be communicated to the system better.

2017 National Summit Brief and Discussion
Speakers: Dr. Dave Cranmer, Deputy Director, NIST MEP, and Zara Brunner, Acting Director, Communications Office, NIST MEP

NIST MEP has plans to hold a National Summit in 2017 because it:
- Provides a way for the MEP system to learn and grow.
- Brings together the leadership and the practitioners to share formally and informally what works and what does not.
- Allows networking to introduce us to one another and build trust among the various organizations and people.
- Identifies gaps in the system that need to be filled.

Background
- The National Conference ran for 6 years and typically had 600-800 attendees.
- The May 2012 MEP National Conference "Manufacturing Innovation" was held in Orlando, FL and had approximately 600 attendees.

- The Conference had 3 primary tracks:
    o Embracing transformative manufacturing trends
    o Leading innovative organizations
    o Implementing growth strategies

Center and Board Sessions in 2012
New board member orientation
Board member networking
National Advisory Board meeting
Board member workshop with various topics
Strategic planning
Measuring board effectiveness
MEP impacts
Strategic partnerships

Next Steps:
2016 Update Meeting
Revisit the 2012 schedule and content as a starting point
Get input from Centers, Working Groups, and other stakeholders
National Advisory Board "ask"
- Input on the agenda, specifically Board Training

Discussion
- National Advisory Board members, Center board members, and subrecipient board members are invited to the National Summit.
- There will be a balance between the diversity of sessions and continuity.
- Boards are made up of manufacturers interested in many topics outside of board development.
- The Summit presents opportunity to move the NIST Director's 3 focuses ahead.
- Invite national lab reps and regional students.
- MEP intends for the National Summit to coincide with the ASMC Best Practice Conference.
- MEP should consider utilizing exhibits or booths to demonstrate additive manufacturing technologies and NIST lab technologies.

Q: What is the sponsorship model for the Conference?
A: A per diem rate will be negotiated with a hotel that offers it to everyone. Much of it is fee-based.

Advisory Board Review of Report Draft
Speaker: Carroll Thomas, NIST MEP

Carroll Thomas provided an overview of the MEP draft report due to Congress on March 9 and requested feedback from the Advisory Board on the content.

Feedback:

Letter from Advisory Board to Congress:
- Good flow
- Appropriate level of information
- First page is critical
- MEP should provide the report to local Centers and their boards.

About the MEP Section:
- Requirements of board representation are reflected in the Round 3 competition FFO and in updated terms and conditions for cooperative agreements- 10 members; Majority must be small manufacturers; 2 must represent MEP Centers.
- It should include a summary of the Advisory Board charter.
- Biographies will include board term service periods in years.

Activities Section:
- Enough background provided for report out on Technology Acceleration and Board Governance subcommittees.
- Content should start with high level strategic goals and summary, then subcommittee activities, and then Center competition updates.

Budget Section:
- Include language around the Advisory Board's continued support of additional funds in order to meet the needs of the manufacturers in the network that MEP serves.
- It is the view of the Advisory Board that having readjusted the cost share to 1:1 would help improve the performance and efficacy of the MEP network. The Board believes it is critical to ensure the continued success of the MEP directive.
- The MEP Advisory Board appreciates the support of the Administration and that has only served to highlight the need to increase the cost share to 1:1 permanently.
- Ensure that verbiage in the cover letter and cost share language are consistent throughout the report.

Concluding comments
- The morning's joint session with local boards was informative and helpful.
- Opportunity to mix table seating composition at future joint sessions.
- Advisory Board is responsible to take action upon hearing feedback and facilitate local engagement.
- Innovation ecosystems focus on bringing manufacturing back to America.
- Science & Engineering Festival in Washington, D.C. April 16-17, 2016.

- Pilot embedding Institutes and MEP Centers presents a new type of model for government agencies and the Advisory Board would like to be kept informed of pilot.
- Address connection between Advisory Board, local boards, and other stakeholders to articulate roles.
- Utilize social media, MEP's blog, and LinkedIn in directing people to MEP Connect.
- Board members stressed the importance of getting cost share into permanent law.
- Connect various pieces of the system and MEP Centers across the country.
- MEP should take advantage of the timing in current technology-based economic development activity that is focused around manufacturing.
- Maximize impacts for SMEs; SMEs are the ones creating the jobs for the future.
- MEP is championing manufacturing from a grassroots level to a political level.
- Diversity of Center boards, Center Directors and NIST staff is important in working groups.
- Engage local educational institutions to participate in Advisory Board activities.
- Consider developing additional subcommittees to address tasks from the morning session and provide deliverables to Centers.
- Identify tools that Centers need to help SMEs on emerging issues and emerging technologies.

Q: Will the format for this meeting repeat?
A: At the National Summit we will look to what works best but we want to bring the boards together again.

Q: When will the MEP transformation be completed?
A: It is a long complex exercise and even at an aggressive timeline we could not get it in place before Oct. 1. Sometime in the last quarter of the calendar year we would like to get this in place. The reason we have aggressive timeline is because of a transition in Administrations. MEP is not starting from new but this is an extension of what was already happening.

Q: Who is going to replace Gary Yakimov to help in the Strategic Plan?
A: Dave Cranmer and Chancy Lyford will be the primary staff leading the Strategic Planning effort.

Next Meeting
The next Advisory Board Meeting is May 19, 2016 in Charleston, SC.

Adjournment
With no further business, Ms. Wessel adjourned the meeting.