

**National Institute of Standards and Technology
Manufacturing Extension Partnership
Advisory Board
Minutes of the September 15, 2016 Meeting**

Background

The Department of Commerce (DOC), National Institute of Standards and Technology (NIST), Hollings Manufacturing Extension Partnership (MEP), Advisory Board met in an open session from 8:00 a.m. to 4:00 p.m. on September 15, 2016 at the Detroit Marriot at the Renaissance Center in Detroit, MI. Approximately 27 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

José Anaya, Dean of Community Advancement, El Camino College
Bernadine Hawes, Senior Research Analyst, Community Marketing Concepts
Tommy Lee, President, Vulcan, Inc.
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.

Guest Presenter

Dan Berglund, President and CEO, SSTI

NIST MEP Participants

Carroll Thomas, Director, NIST MEP
Dave Cranmer, Deputy Director, NIST MEP
Mary Ann Pacelli, Manager of Workforce Development, NIST MEP
Clara Asmail, Senior Technical Advisor, NIST MEP
Cheryl Gendron, Advisory Board Liaison, NIST MEP

Observers

Zara Brunner, NIST MEP
Buckley Brinkman, WMEP
Kelly Buchanan, Foundation for Manufacturing Excellence
Tom Bugnitz, Manufacturer's Edge
Sara Byre, SD MTS
Mike Coast, MMTC

Don Cuperus, SD MTS
Dan Curtis, AMS
Kurt Felten, AKA
Carrie Hines, ASMC
Ethan Karp, MAGNET
Dan Manetta, IMC PA
David Stieren, NIST MEP
Ben Rand, Insight Consulting
Marlon Walker, NIST MEP
Bob Zaruta, NWIRC

Welcome, Introductions, and Opening Remarks

Speaker: Vickie Wessel, Chair, NIST MEP Advisory Board

Ms. Wessel called the meeting to order at approximately 8:00 a.m.; Ms. Wessel made introductory remarks and asked the Advisory Board members and meeting participants to introduce themselves.

Presentations

MEP Director's Updates

Speaker: Carroll Thomas, Director, NIST MEP

Ms. Thomas provided updates on NIST MEP including the program's budget, legislative outlook, vision, and ongoing activities.

Budget Appropriations

- The FY 17 Appropriations are not signed yet and still within Congress.
- Most likely there will be one or two Continuing Resolutions (CR), projected to start Oct 1, 2016.

Cost Share

- An update on the 1:1 Cost Share issue includes pieces of legislation in both the House and Senate with bipartisan support.
- In years 4 and 5 of an award a Center will enter a 2:1 match.
- Trying to match federal share at 2:1 makes it necessary for some Centers to pursue larger projects at the expense of working with smaller manufacturers.
- Most similar federal programs have 1:1 match.

NIST MEP FY 2017 Projected Spend Plan

President's Request \$142.0M

Projection \$130.0M

Funds in a Continuing Resolution \$130.0M

Centers Renewals and Additional Competition Funds \$110.0M

Rolling FFO (Supplemental Funds) - \$2.0M Embedding FFO Part II (\$2.0M from FY16)
MEP System Support/Staff/Overhead \$18.0M
Total Planned Expenditures \$130.0M

Status of Competition Rounds:

- Round 4 will be completed Sep. 27, 2016 and 11 states will be awarded new five year MEP Center contracts as early in 2017 as possible.
- As of Oct. 1, 2016 there will be 51 MEP Centers.

MEP/Institute Embedding Pilot:

The Pilot awards were announced September 14, 2016 for the purpose of demonstrating ways to leverage MEP assistance to small U.S. manufacturers in technology focus areas of the Manufacturing USA (f/k/a NNMI) Institutes.

- California Manufacturing Technology Consulting - Partnering with NextFlex, the Flexible Hybrid Electronics Manufacturing Innovation Institute
- Illinois Manufacturing Excellence Center - Partnering with The Digital Manufacturing and Design Innovation Institute (DMDII)
- New York State Department of Economic Development - Partnering with The American Institute for Manufacturing Integrated Photonics (AIM Photonics)
- North Carolina State University - Partnering with Power America
- The University of Tennessee - Partnering with The Institute for Advanced Composites Manufacturing Innovation (IACMI)

NIST Organizational Changes:

- A structure designed to better support the goals and strategic objectives of the program has been approved by NIST and will be implemented Oct. 1, 2016.
 - A new reporting structure will optimize the flow of information for efficient decision making
 - Staff requested new management and leadership opportunities

MEP is Building National Outreach and System Knowledge through the following projects:

- State Relations Support Award - SSTI and the Center for Regional Economic Competitiveness are working to advance MEP's network of relationships with state stakeholders to include those at the county, community and city levels
- Workforce Research Support Award – WorkCred; American National Standards Institute is examining the quality, market value, and effectiveness of manufacturing credentials

Board Updates:

- The triannual Advisory Board newsletter distributed its first issue in July and will produce another in 2016.
- NIST MEP Board Development Support Services Initiative will be rolling out in 2017 for all MEP Center boards to have access.
 - MEP Network access to BoardSource online content includes:
 - Board Self-Assessment (BSA) utilizing BoardSource BSA tool that will:

- Gather feedback from individual board members and measure the collective performance of the board.
- Comprehensively and confidentially assess the board's performance in key areas to strengthen the full board's governance performance and practices.
- Board Self-Assessment with Action Planning
 - Pairs individual with a select resource to facilitate a conversation in the boardroom about the results of self-assessment and next steps for board development.
- Training workshops
 - Prepares local boards to fully embrace their roles, enhance understanding of the requirements, implications and associated best practices in Board Governance.

MEP National Summit

- The MEP Summit will take place on April 30 ([pre-Summit kick off](#)) – May 3, 2017, in Denver, Colorado with the following tracks:
 - **M:** manufacturing technology and trends; Themes: Manufacturing Technology/Current and Future Trends
 - **E:** extension services and knowledge sharing; Themes: Service Delivery for Clients and Operational Excellence for Centers
 - **P:** partnerships and ecosystems; Themes: Partner Relationships/Value to Ecosystem/Leveraging and Convening Role

New Performance Metric System

How information from the new indicators will be used:

- To use as guiding information similar to a GPS rather than a report card rating
- Aligned with MEP to strengthen capabilities and enhance competitiveness (MEP's Strategic Goals)
- To compare Center's performance over time and not used as single determination for base funding
- Performance-based supplemental funding for Centers applying as lead starting April 2017
- To identify opportunities for practice sharing Center match ups

Ten Metric Indicators (Each item has ten points to make 100):

1. Client Counts
2. New Clients
3. Net Promoter Score®
4. Survey Impact Metrics
5. New Sales
6. Retained Sales
7. New Investment
8. Cost Savings
9. Jobs (new & retained)
10. "Share of clients improving competitiveness"

Performance Levels:

- Performing with Distinction 100
- Performing 70-90
- Conditionally Performing below 70

NIST MEP is commissioning a specific study on the performance metric system to identify possible needs.

Information is compared to previous year's quarter.

- Assists with annual review to capture trending position of Center
- Comparative to planned operating outcomes
- Metrics count starting April 2017

Supplemental Funding

- Centers above threshold must partner with complementary Center below threshold
- Used as "carrot" for performance-based directed funding and does not impact base funding

MEP Center Generating Impact Investment

- Averaged sized Center - \$2M
- Cost \$1.75M to get a center to the point of generating impact (\$3.75M with matching funding)
- Should a Center close: Estimated loss of impact - \$145M in sales loss, \$290M cost savings loss, \$58M in investment losses and 1,245 jobs lost created and retained on annual basis

The Vision of MEP

Changing the way the world defines manufacturing.

The role of MEP in helping clients identify technologies, partners, issues (i.e. cybersecurity, supply chain), and insight into the total picture of manufacturing.

Highlights from Deloitte/Council on Competitiveness 2016 Global Manufacturing Competitiveness Index (GMCI):

- Report finds that China is leading global manufacturing and the US is second. The US is slated to be the lead by 2020.

Study found top major determinants of global manufacturing competitiveness are:

1. Talent
2. Cost competitiveness
3. Workforce productivity (recently been stagnant)
4. Supplier network (especially important for smaller companies)
5. Policy (taxes, regulations)

Ms. Thomas discussed the evolution of NIST MEP's original mandate and the next generation of manufacturers in regard to the importance of incorporating new complementary technology capabilities into products.

The Board's role in the transformation of manufacturing is that of a trusted advisor infusing technology, interconnectedness and disrupted perspectives into:

- Production- efficiency and excellence
- Business strategy- new products/find new markets
- Manufacturing infrastructure- connections, workforce, banking, accounting and legal

National MEP Network Direction

- There will be 51 Centers – Every state and Puerto Rico
- Building a cohesive National Network brand identity and value proposition
- A unified National Network brand is critical for long-term survival
- MEP will collectively build it together and choose to go in a direction that encompasses the diversity of the national network

Trends in Economic Development: Their Impact on the MEP System

Speaker: Dan Berglund, President and CEO, SSTI

Mr. Berglund provided insight into how SSTI is working with NIST MEP on initiatives that will improve relationships with state stakeholders and presented trends in economic development and resulting impacts.

Unstagnating Wages – Census Bureau

- The median household income was \$56,500 in 2015, up from \$53,700 in 2014, but still down from \$57,724 in 2000.
- Marks the first increase in median income since 2007, the year before the Great Recession started.
- 30-year-olds today make around the same as 30 year-olds in 1984, according to Center for American Progress report (adjusted for inflation) even though they are 50% more likely to have finished college and the economy is 70% more productive.

Income inequality

- Middle income Americans are no longer the majority and share of aggregate income held by middle-income households has decreased significantly.
- In 2015 half of the country is in the middle class categorization.

The importance of manufacturing in the American economy

- Employs approximately 12.3 million people
- Helped lead the economic recovery and out of the Great Recession
- Average wages of nearly \$65,000 - 21% higher than the average for all industries
- 33% of manufacturing jobs held by minority workers
- Accounts for 18% of employment in rural areas vs. 8% of metro employment

- Important for rural legislators – Manufacturing employment started to slow in the last year
- More than 75% of private sector R&D performed by manufacturers

Manufacturing is a popular policy prescription because of the above average wages that help support middle class, being an economic pathway for those not going to college, and job creation. State economic development policy is cyclical and a down cycle for manufacturing is likely to occur when/if the next big thing presents itself, something else solves the economic policy issues, or there are major job losses occur in manufacturing.

Q: How do you define rural? 18% seems high.

A: We defined rural as non-metro. If you were in a city area or county around a city, that is a metro area. Outside of that is counted as rural. The reason it is large is that there are more hidden manufacturing activities going on in rural areas than might be the popular perception, and you have got a smaller population base. That will have a larger percentage impact than if in a metro area. 18% of the rural area is employed in manufacturing.

Focus Group Results

An overview was provided of SSTI's focus group results from last year. 35 registered voters in battleground states were surveyed on reactions to different words, messages, and associations.

Innovation – 65% positive; 3% negative

Associations: Necessary, Creative, Technology, Research, Creativity, Progress, New, Advancement, Growth

Entrepreneurship – 49% positive; 20% negative

Associations: Money, Own boss, Risk takers, Brave, Owning own company, Freedom, Risky, New companies

Technology – 40% positive; 15% negative

Associations: Electronics, Internet, Computers, New ideas, Money, Software, Improving life, Progress

Manufacturing – 23% positive; 33% negative

Associations: China, Waning, Hard work, Lay-offs, Foreign, Overseas, Pollution, Blue collar

Manufacturing faces important public perception problems

- Only 37% of parents would “encourage my child to pursue a career in manufacturing,” according to Deloitte and The Manufacturing Institute.
- 66% cited worries about job security and stability as concerns about manufacturing as a career path.
- For 19-33 year olds, manufacturing came in seventh of seven industries they would prefer to enter if they were beginning their career today.

Challenges for 2016 - 2019

Regarding gubernatorial transitions, there are guaranteed 29 new governors which is an extraordinarily high number. MEP has work to do preparing for the transitions and campaigns. SSTI suggestions for MEP include:

- Listen to what candidates are saying
 - What are their priorities?
 - How does your work fit those priorities?
- Clear articulation of work and the impact it is having (both data and anecdotally)
- Recommendations for change/improvement
- Suggestions for people on transition teams & Administration

Preparing for transitions and post-election:

- MEP staff or allies meet with policy advisors or transition teams set up for individual agencies
- Expect there will be new strategic plans/visions for economic development
 - Participate in the process
 - Provide information throughout the process
 - Engage different people throughout the process
 - Campaign staff
- New governors have new visions and strategic plans for economic development - Be actively engaged in that strategic planning process
 - Transition team
 - First year appointments

State Budgets and Economic Development Trends

State general revenue funds finally surpassed FY2008 levels, but 29 states are still below the FY2008 levels. This could indicate that the National Association of State Budget Officers projection of 2.5% increase in spending for FY2017 is overly optimistic. States cutting spending midyear as reported by NASBO are the following:

- 2014- 8
- 2015- 14
- 2016-18

The Center for Regional Economic Competitiveness is tracking state funding for economic development and reported a decrease in 2010 with recent years stagnant. State are seeing increasing pressure for transparency and accountability for the use of funds in state governments. Governments are also seeing an increase in examination of tax records and incentives. The work MEP has done in risk management, working with Centers, and transparency in metrics presents an opportunity for MEP in this regard.

State line items for funding of MEP Centers are as follows:

- Direct line items in: AL, AR, CT, FL, ID, IL, MA, MT, NY, SC, VT, VA
- Line items added in recent years in: FL and IL

- Line items eliminated in recent years in: KS, PA and WV
- Line item threatened this year but retained: CT

The Kansas MEP parent organization was eliminated. In Connecticut, Pennsylvania, and West Virginia the legislature eliminated all line items within the state's economic development budget and placed funds into a single line item, leaving the line item to the executive branch to allocate funding.

SSTI gathered profiles on activities occurring in 36 states regarding strategic plans and key industry areas and noted that many states use the term advanced manufacturing as opposed to manufacturing.

Economic Development Leaders Roundtable of 18 states from June of 2016 held in Nashville, TN identified the following challenges:

- Rapid changes in the manufacturing sector
- Limited resource to provide financial assistance to existing manufacturers
- Rising workforce challenge as manufacturers use outsourced workers (through staffing agencies) and utilize temp-to-hire practices

SSTI Strategies:

- Partnering with MEP staff to conduct business visits and serve as an early warning system
- Tapping into funds available for proactive training through the WIOA
- Advocating for adoption of more flexible definitions of "employee" and "new jobs"
- Providing capital expenditure grants to existing companies
- Educating legislatures on the multiplier effect of manufacturing
- Partnering with National Conference of State Legislators to gain more information

Challenges SSTI members cite include defining MEP's narrative, measuring impacts, addressing the rural/urban divide, and inclusion issues. There is uncertainty on a federal level around the presidential race and movement on 1:1 matching.

Opportunities/challenges for Manufacturing

- Democratization of manufacturing with maker spaces and how to work with the MEP system
- Manufacturing USA/ embedding FFO – developing self-sustaining entities is a challenge
- Ongoing workforce challenges
- New technologies and translating their relevance to SMEs
- 14.3% of MEP clients in the MEP survey list technology needs as one of the top three challenges they face
- Manufacturing is a way to address income inequality and education pay differentials
- Policymakers are better understanding of manufacturing but are influenced by voters
- There is a desire for MEP to play a broader role in addressing manufacturing issues
- Match issues identified as an obstacle for MEP Centers playing a bigger role

- Recompensation has provided a means of opening new dialogues and encouraging alignment with state governments

Discussion

- MEP's rolling FFO includes reviewing proposals to identify makers ready to become manufacturers. MEP will help adapt some services for scale up.
- There is a push for SMEs to get new products to market and enhance their position in the marketplace, but the total business model is concerning.
- The regulatory environment is oppressive for manufacturers, particularly Department of Defense Federal Acquisition Regulation System (DOD FARS) and DFARS that are being flowed down to the sub tier supply base.
- It is not a prime's responsibility to make sub tiers compliant.
- Spend dollars have come back after sequestration but margins have not.
- Becoming compliant is costly and is not revenue generating.
- The Board would like to delve deeper on MEP survey results around the needs of business owners.
- Small businesses tend to focus on short term as opposed to five years out and the value of MEP to SMEs is to get them to think about that.
- MEP used to be focused on quality but the model is changing rapidly and now the focus is on the total business picture.
- Regarding the gubernatorial environment, it is critical that Center Directors are informing candidates about what MEP is.
- Companies that have used MEP must be vocal to candidates. The people in the companies are voters and information needs to come from the constituent base.

MEP Strategic Plan 2017-2022

Speakers: Vickie Wessel, Chair, MEP Advisory Board, and Dave Cranmer, Deputy Director, NIST MEP

Dave Cranmer provided insights around the NIST MEP strategic plan that included a brief history, current activities, and next steps. The NIST MEP's strategic plan encompasses four main pillars with subsequent strategic objectives, developed in 2012, and listed below:

Enhance Competitiveness: Enhance the Economic Competitiveness of U.S. Manufacturers

Strategic Objectives:

- Deliver services that create value for all manufacturers, particularly focusing on small and mid-sized (SMMs)
- Enable Centers to make new manufacturing technology usable by U.S.-based SMMs
- Develop "Data as a Service" for competitive advantage

Champion Manufacturing: Serve as a Voice to and a Voice for Manufacturers

Strategic Objectives:

- Champion the importance of SMMs and ensure their inclusion in the economic competitiveness policies and programs of the U.S. government
- Increase role of National and Center Boards

Support Partnerships: Support National, State and Regional Manufacturing Eco-systems

Strategic Objectives:

- Provide Centers with local flexibility and adaptability to operate based on regional priorities and client needs
- Support national policy goals

Develop Capabilities: Develop MEP's Capabilities as a Learning Organization and High Performance System

Strategic Objectives:

- Promote system learning
- Evolve MEP performance system
- Continue administrative reforms

Since the pillars were developed there have been several environmental changes including senior leadership changes, the upcoming completion of the recompetition, and the reallocation of funds to the Centers with temporary cost share relief (Cost share is re-set at 1:1 for the first three years of new awards).

NIST MEP has had the benefit of a very high level of engagement by the Advisory Board in terms of helping activities in Technology Acceleration, Board Governance and becoming a Learning Organization.

Major Challenges Ahead:

- Not in MEP's control:
 - New Administration
 - Legislation on cost share (two senate bills and one house bill that have not yet passed.)
 - Funding to provide consistent resizing of the Centers
 - Board turnover
- In MEP's control:
 - Branding
 - Messaging about the network for manufacturers and funders
 - How to engage and educate state legislators
 - Implementation of new performance metrics system

The Board had submitted questions on the strategic plan and the responses were reviewed. The Board also previously requested a review of strategic accomplishments.

- What has been communicated to Centers?
 - MEP plans to engage with the Foundation for Manufacturing Excellence (FME) to communicate status.

- Is the strategy reflected in recompetition proposals?
 - MEP staff will re-examine strategic plans of the recompetition proposals in terms of strategic objectives.
- What has been MEP's engagement with Start-ups, Rural and Very Small Firms?
 - A Start-ups, Rural and Very Small (SURVS) working group is in place
 - MEP is mining survey data on rural and very small firms to look at history and trends
 - Currently 30% of MEP's clients are small
- How will MEP work on state engagement?
 - Engage SSTI to look at the status of current engagement and recommend best practices.

Mr. Cranmer identified selected NIST MEP activities and accomplishments related to the elements of the strategic plan:

- Delivering services that create value for manufacturers
- Enabling Centers to make new technology processes usable by SMEs
- Developing Data as a Service for competitive advantage
- Advocating for the inclusion of SMEs into economic policies and programs.
- Growing Manufacturing Day
- Branding project that will identify common elements of the network
- Provide local flexibility for local Centers
- Interagency activities at the federal level – IMCP, Make it in America, i6
- Working with the White House on maker initiatives
- DOD and DOE engagement with Manufacturing USA
- California Network for Manufacturing Innovation
- Promote system learning through National Summit
- Administrative reforms around performance metrics

Next Steps

- Re-engage with Centers over next several months
- Review and compare recompetition proposals for Center strategies with current strategic objectives
- Engage in regional calls with local boards
- Re-engage with Center working group
- Re-engage with MEP Staff

Timeline for Strategic Plan:

January - Draft Implementation Plan

- Review by Center Workgroup
- Review/Discussion of Implementation Plan with Advisory Board

February/March - Revise Implementation Plan

March/April - Finalize Implementation Plan pending board approval

- Review/Discussion with Centers at System Meeting

May – Implement Plan

- Endorsement by Advisory Board

2017-2022 - Execute Plan

Key challenges include agreeing on a desired future state for MEP and developing indicators of success.

Strategic Objectives Questions

- Are these the right objectives, given the environment and challenges?
- Have we included objectives that should not be here?
- Have we missed anything that should be here?
- Is this process adequate?
 - For collecting the needed input?
 - For developing the implementation plan?
- What are common sense revisions, given the environment and challenges?

Discussion

- MEP's role as a voice for manufacturing related to recommendations that are not aligned with Administration goals (i.e. tax reform).
- Offer service to SMEs and connect them with third parties when dealing with complicated regulatory compliance flow-downs (notably cybersecurity and FSMA).
- MEP is implementing FSMA compliance training tools.
- System wide message on the importance of working with trade associations and the thin line between advocacy and lobbying.
- The Advisory Board was unanimous in approval of the direction of the four strategic pillars outlined in the strategic plan.
- The strategic plan needs to be revisited annually, particularly around evaluating the activities related to each pillar and addressing the needs of SMEs.
- Metrics drive performance should be tied to overall strategy.
- Center Directors need to advocate by talking to state representatives and senators.

Promoting, Managing and Tracking Connections between SMMs and NIST Labs through MEP Centers

Speaker: Clara Asmail, NIST MEP

MEP should give priority to developing and implementing Technology Acceleration opportunities with NIST Labs and Manufacturing USA Institutes over the next year, while also pursuing the emerging collaboration with DOE labs. Connections are underway with Institutes and DOE Labs.

NIST MEP is funding the embedding of MEP Center staff at five Institutes to facilitate the transition of their technological innovations and workforce tools to SMMs.

The initiative is aligned with the MEP strategic plan in that it will:

- Connect NIST Laboratory support in measurement science, standards and technology to SMMs when and where appropriate in order to enhance their competitiveness.
- Connect MEP Centers with NIST Labs to bring their expertise to SMMs and the voice of SMMs to the NIST R&D programs in order to build enduring partnerships.
- Connect MEP Centers with NIST's world-class measurement science, standards and technology solutions in order to build a learning, high-performing organization.

Responsive connections in which the SMM or Center originates a connection to a NIST Lab include:

- Inquiries from Centers on behalf of SMM clients for NIST Lab support/consultation
- Inquiries from SMMs direct to NIST/NIST MEP

Proactive connections in which the NIST Lab or NIST MEP originates a connection to the SMM or Center will prompt NIST MEP staff to:

1. Identify NIST Lab research "right and ready" for transfer to SMMs or in need of SMM input/testing
2. Identify existing NIST Lab collaborations with SMMs that may benefit from MEP support, and then work with willing Centers (bring from R&D to market)

NIST Lab – MEP Connector Protocol

- Track the number of connection outcomes from connections/projects breadth across NIST Labs and Centers
- Identify and actively track inquiries from public, through Centers for NIST Lab support until completed and track outcomes
- Identify Lab programs, MEP-ready NIST technologies ready for SMM adoption, manage appropriate outreach through Centers to SMMs; track resulting projects for outcomes

The Connections Tracking Database will capture projects from all scenarios in one system that will allow:

- Project management from initiation to satisfactory completion
- Analysis of outcomes from outreach campaigns to allow redesign of outreach and project management

The Connector Protocol Rollout Plan consists of several pieces:

- Develop draft Connector Protocol processes
- Develop draft Connector Protocol Projects Database
- Communicate vision and strategy internally within NIST MEP and refine as necessary

The success of the protocol depends on each NIST MEP management of projects to actively check on connections for viability, reinforcements needed, outcomes, etc.

Next Steps

- Collaborate with MEP Communications Team to build out an MEP webpage, and place a link to this webpage from “How to Work with NIST” pages.
- Develop library of short vignettes or case studies of pre-existing connections for in-reach to Labs and out-reach to Centers.
- Provide Lab Liaisons with project vignettes and begin steps toward identifying early inventory of Lab projects that are right and ready MEP-ready NIST technologies.
- Develop and disseminate through Centers the MEP-ready NIST technologies in appropriate format: technology sheets, workshops, web collaboration portals, or other outreach efforts
- Maintain ongoing effort to reach out to Centers to promote connections and encourage field staff to identify client projects that might benefit from NIST Lab partnering
- Develop mechanisms to inform/update Centers on MEP-ready NIST technologies in an ongoing, as-needed fashion
- Regularly update MEP network on outcomes of connections (to spark additional Center activity).
- Build awareness with Center client base of NIST Labs

As activities build, MEP will continuously track the various projects to monitor outcomes and identify opportunities for new program development. As connection projects are identified and managed, NIST MEP staff will refine data and analysis beyond the current draft database.

Discussion

- Technologies are inventoried into two lists – one on patented technologies that is catalogued by fields and applications in the Partnerships Office, while the other is more informal and belonging to public domain.
- It was suggested that there be technology showcases highlighting the NIST Lab collaborations at the 2017 Summit including chat sessions linking Summit participants with Lab staff in Gaithersburg.
- Address the gap that occurs should an MEP Center work with a lab outside of NIST and how to capture that information for tracking purposes.
- Many of the technology connections involving SMMS, MEP, and NIST Labs are more oriented toward technological expertise, and the chance for an SMM to have a discussion with experts in a particular technology area is invaluable.
- Success stories for MEP Center projects with SMMs are currently available on the NIST MEP public website.

MEP Learning Organization

Speaker: Mary Ann Pacelli, NIST MEP

The Learning Organization’s defined audience and purpose is centered around Center Staff and the development of skills and competencies to support their business models. Specific areas of interest include:

- Internal operations

- Business Services – new services, refreshing current services
- Center Staff development: recruitment, retention, succession planning

The MEP Learning Organization Survey was conducted as a starting point to gather information in the development of the plan for the Learning Organization.

The survey was distributed by FME via their email distribution and 1335 individuals on the list were emailed three times in 2016: July 15, 22, 27 and a link in the MEP weekly email July 25, 2016. The email distribution was sent to Center Directors and other Center Staff that are FME members. The total number of respondents was 42, however respondents were anonymous. 33% of respondents identified as Center Directors. Ms. Pacelli provided an overview of the survey and results.

Questions and Responses

What development content would be most helpful to you?

- Development Needs around Client Operational Excellence:
 - Growth, Lean, Workforce, Culture Change, Leadership/Supervisory, Finance, Organizational Development, Supply Chain, Six Sigma, Commercialization Services, Sustainability, Project Management
- Development Needs around Client Top Line Growth:
 - Supply Chain, TDMI, Sales/Marketing, CEO Consulting, Export, Market Diversification, New Product Development, Product Design, Prototyping, Strategic Planning, Capital Markets, CoreValue, Evolving Manufacturing Trends, Strategy, Innovation, Leadership Development
- Development Needs Around Center Operations:
 - Succession Planning, Center Service Expansion, Small/Rural Services, Business Development, MEP Operations, Market Penetration, Marketing
- Development Needs Around Personal/Professional Development:
 - Project Management, Front of the Room, Technical Writing, Sales skills, Consulting skills

If you could improve your performance in two of the above areas, what would those be?

- Consulting skills, Sales skills, Workforce, Front of the Room, Center Operations

How do you prefer to participate in training/learning?

- Online discussions/web based

Q: Is online discussion different from web based?

A: Discussion includes things like blogs and MEP Connect, while web based consists of structured training such as modules. Self-directed could include online web based but also could be reading a book.

Q: Did you ask for someone to clarify in the survey to identify blogging or could they confuse online with web based?

A: We will conduct a focus group to gain further clarification.

Do you believe that course/content final exams add to the credibility of training provided by Learning Organizations?

- Approximately half of respondents answered yes.

How do you prefer course content/training be provided?

- All of the above, recognized third parties, Center staff, MEP staff

What resources do you currently use to improve your personal performance?

- High preference in networking, workshops, with on line research
- Need to get clarification on what is preferred

What would make MEP a better Learning Organization?

- Sharing best practices and standardized programs

How do you prefer to participate in Training/Learning?

- High preference in Self-directed

Some respondents identified needs for programs that exist and an initial inventory of assets internal to MEP was conducted. MEP may not be promoting these to Centers well enough. Existing programs include Lean, TDMI (Growth), Six Sigma, ISO, and Tech Scouting.

Q: If you have a Center offering a service, will you work with those Centers to use their best practices for dispersing to the system?

A: Yes, the next thing we will be doing is an inventory of what Centers have when we start the focus groups.

The focus group discussions will be held with Center Directors and Center Staff to gain clarification on responses and to gather an inventory of programs that exist at Centers. The sessions will consist of three one-hour webinars that Center Directors will be asked to join.

It is anticipated that there will be a plan in place by spring 2017. There will be an MEP-U type portal system created. The plan will address:

- What the content will be
- How to make it available
- How to sustain it
- Resources – staff, contractors, partners, technology
- Ongoing evaluation for new content
- Networking resources
- Evaluation of outcomes and metrics
- Continuous Learning (Communities of Practice, Working Groups)
- Guidelines for startup and maintenance of the groups
- Evaluation of outcomes

Discussion

- Make vs. Buy – Deciding when to outsource, partner with third parties to license, or develop in-house for customization.
- Weigh cost of development, frequency of use, and need for customization of programs on a case by case basis.
- Establishing a plan will allow MEP to start making investments in programs.
- Determine when to remove outdated programs from the Learning Organization.
- Build into the planning process how to continually predict and meet the needs of future trends (cybersecurity, FSMA compliance, digital manufacturing).
- ASMC routinely screens third parties based on internal recommendations from MEP Centers.

Concluding Comments

Discussion: Board Governance, Succession planning & Quorum; Reappointment of Board

- It was suggested that the next Vice Chair have a small manufacturing background.
- Both the current Chair and Vice Chair have been asked to stay on in their past appointed positions.
- The vetting process for potential Board members should include an obligation to remain the full length of the membership term.
- In May 2017 there will be four members transitioning off the Advisory Board.
- There is no quorum in the Charter.
- It was suggested that there be language requiring attendance of the majority of Advisory Board meetings in a year.

- Ensure representation of small businesses, educational institutions and large companies on the Board in succession planning.
- The federal vetting process is approximately 90 days.
- There will be research to investigate the development of Advisory Board by-laws to which the Charter will refer.
- NIST MEP is actively accepting nominations for Advisory Board membership.

General Comments

- The strategy and direction of NIST MEP were immensely clarified for Board members.
- It was noted that the overall meeting was productive with regard to clarification on the program's vision.
- The Learning Organization presentation was noted as being particularly informative.
- The MEP branding effort brings credibility to the Department of Commerce and legislative concerns with regard to continued funding.

Next Meeting

The next Advisory Board Meeting is February 1, 2017 in Gaithersburg, Maryland.

Adjournment

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