

**National Institute of Standards and Technology  
Manufacturing Extension Partnership  
Advisory Board  
Minutes of the May 20, 2014 Meeting**

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**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 8:30 a.m. to 5:00 p.m. on May 20, 2014 at the National Institute of Standards and Technology in Gaithersburg, Maryland. Approximately 68 attendees, composed of Advisory Board members, NIST, and MEP participants, guest speakers, and observers, attended the meeting. Phillip Singerman, Acting Director of MEP, is the Designated Federal Officer for the MEP Advisory Board.

**Attendees**

**Board Members**

Roy Church, President, Lorain County Community College  
Carolyn Cason, Vice President of Research, University of Texas, Arlington  
Bernadine Hawes, Chair, DVIRC Board of Directors  
Tommy Lee, President, Vulcan, Inc.  
Bill Shorma, President, Rush-Co  
Vickie Wessel, Vice Chairman, NIST MEP Advisory Board, and Founder and President, Spirit Electronics, Inc.  
Jeff Wilcox, Vice President for Engineering, Lockheed Martin  
Ed Wolbert, President, Transco Products, Inc.

**NIST MEP Participants**

Pat Gallagher, Director, NIST  
Ron Gan, Administrative and Financial Management Officer, NIST MEP  
Bill Kinser, Director, Center Operations, NIST MEP  
Karen Lellock, Senior Policy Advisor, NIST MEP  
Jeff Lucas, Senior Performance Analyst, NIST MEP  
Mike Simpson, Director, System Operations, NIST MEP  
Phil Singerman, Acting Director, NIST MEP  
Mark Troppe, Manager, Strategic Partnerships, NIST MEP  
Gary Yakimov, Manager, Policy and Research, NIST MEP

**Observers**

Clara Asmail, NIST MEP	Samm Bowman, NIST MEP
Megean Blum, NIST MEP	Buckley Brinkman, WMEP
	Zara Brunner, NIST MEP

Kelly Buchanan, ASMC  
Ron Burke, New Mexico MEP  
Dave Boulay, IMEC  
Monica Claussen, NIST MEP  
Mike Coast, MMTC  
Beth Colbert, NIST MEP  
Dave Cranmer, NIST MEP  
Dusty Cruise, Missouri Enterprise  
Dan Curtis, AMS  
Jeff Eckoff, SDMTS  
Karen Fite, GaMEP  
Francisco Garcia, PRIMEX  
Jennifer Hagunder, UT CIS  
Dan Halverson, NDMEP  
Diane Henderson, NIST MEP  
Carrie Hines, ASMC  
Steve Holland, Montana MEP  
Tom Jacobson, WMEP  
Wes Kelly, SDMTS  
Brian Lagas, NIST MEP  
Dan Lilley, NIST MEP  
Mandy Mallott, NIST MEP  
Deirdre McMahon, NIST MEP

Petra Mitchell, Catalyst Connection  
Tom Palisin, PA DECE  
David Pierluissi, PRIMEX  
Kari Reidy, NIST MEP  
Migdalia Rosado, PRIMEX  
Mark Ross, SD MEP  
Mark Schmidt, NIST MEP  
Heidi Sheppard, NIST MEP  
Megan Spangler, NIST MEP  
Dave Stieren, NIST MEP  
Dileep Thatte, NIST MEP  
Gary Thompson, NIST MEP  
Monica Teheart, SD MEP  
Ameet Vaghela, Lockheed Martin  
Ramon Vega, PRIMEX  
Jedd Vertman, NIST MEP  
Ben Vickery, NIST MEP  
Ken Voytek, NIST MEP  
Chester Vrocher, ATN  
Phillip Wadsworth, NIST MEP  
Stacey Wagner, NIST MEP  
Tab Wilkins, NIST MEP  
Henry Wixon, NIST

## **Welcome, Introductions, and Opening Remarks**

***Speaker: Vickie Wessel, Vice Chair, NIST MEP Advisory Board***

Ms. Wessel called the meeting to order at approximately 8:40 a.m.; Ms. Wessel made introductory remarks and had the Advisory Board members and meeting participants introduce themselves.

## **Presentations**

### **Remarks by NIST Director**

***Speaker: Patrick Gallagher, Director, National Institute of Standards and Technology***

Dr. Patrick Gallagher welcomed the Advisory Board members to the meeting and acknowledged the new members joining the Board. Dr. Gallagher commended the MEP staff for their dedication and hard work during the recent time of transition in the program. Finally, Dr. Gallagher recognized MEP's partners for their commitment to manufacturers and in leveraging federal resources through the program to support their communities.

Dr. Gallagher shared his thoughts on the recent work and focus of the Advisory Board.

## Cost Share

- Making the case that adjusting federal cost share requirement would benefit the program results in:
  - Maturity of discussion at the national level
  - Momentum building bipartisan support
  - Addresses key barriers in program from chasing match to focusing on needs of manufacturers

## Strategic direction of MEP

- Two major drivers
  - U.S. manufacturers are rapidly changing and adjusting
  - Manufacturers' needs are changing quickly
- Dramatic shifts are becoming critically important to the competitiveness of companies
  - Becoming diverse
  - Innovation is pervasive across the system
  - Connectivity in business community is a major driver
  - Role of manufacturing in communities
- In times of change there is danger in losing focus
  - Use the strategic document as a communication tool to address what MEP is trying to do
  - Treat this as a constant touch point, not a one-time event

Dr. Gallagher concluded his review with the following observations:

- Manufacturing is a public policy issue, not a short term issue
- The fundamentals that drove it to the forefront are strongly related to the core of our economy
- Two-thirds of research and development institutions are held by the private sector
- Manufacturers' focus shifting to skills and workforce issues
- Manufacturers do not have a working solution- MEP has a role to facilitate

The floor was then opened up for questions for and comments by Dr. Gallagher.

## Comments

- MEP's evolving role in NIST is one of stability
- The focus on manufacturing puts MEP in a fresh light
- Management changes in MEP have a renewed focus on centers and center leadership
- Movement to link education to business and jobs— increase alignment

- MEP will play a pivotal role in facilitating that action
- Discussion mediated by third parties is not the solution. Business needs to interact more strongly with education. MEP has relationships on both sides and could bring them together.
- NNMI: Transition from consortium of public research to commercial impact
  - Not a single approach to transition into successful products and services
  - Key parts— movement of people/collaboration/relationships
  - Network connection in community is necessary
- Future IMCP community designations – the role of MEP & NIST
  - Focus on challenges in place based strategies
  - Federal role is supporting local efforts, not managing
  - More questions than answers at this point

### **MEP Strategic Planning**

***Speakers: Gary Yakimov and Jeff Lucas***

Mr. Yakimov provided a recap of the strategic planning process and reflected on MEP’s legislative mandate. Mr. Lucas provided details on constructing the strategic plan. Key activities included gathering stakeholder input from centers, boards, states, manufacturers, and trade associations, and conducting environmental scanning for emerging trends. Feedback from the National Academy of Sciences was also considered.

After completing the data collection phase, MEP is moving forward on refining details in the plan. Mr. Yakimov then shared the strategic plan.

### **Mission**

- To enhance the productivity and technological performance of U.S. manufacturing

### **Role**

- MEP’s state and regional centers facilitate and accelerate the transfer of manufacturing technology in partnership with industry, universities, and education institutions, state government, and NIST and other federal research labs and agencies.

### **Goals and strategic objectives**

- Enhance the economic competitiveness of U.S. manufacturers
  - Deliver services that create value for all manufacturers, focusing on under-served SMEs
  - Enhance competition through both Top-Line and Bottom-Line approaches
  - Enable centers to make new manufacturing technology, techniques, and processes usable by SMEs

- Improve relationships with and understanding between federal labs and educational institutions
    - Utilize technology road mapping
- Serve as a voice to and a voice for manufacturing
  - Strive for inclusion of SMEs in economic policies and programs
  - Increase role of national and center boards
  - Develop “data as a service” for competitive advantage
- Support national, state, and regional manufacturing eco-systems and partnerships
  - Provide centers with local flexibility to operate based on regional priorities and client needs
  - Inform the development of federal and state strategies, and align them with the needs of centers and manufacturers
  - Support national policy goals
- Develop capabilities focused on the MEP system
  - Promote system learning
    - Employee Exchange program is underway
  - Evolve performance system
  - Continue administrative reforms
  - Refresh performance of MEP system and centers through re-competition of the centers
    - Align national strategies with center and state priorities
    - Rebalance center funding to ensure appropriate funding ratios

**Q:** What mechanisms are we putting in place to ensure alignment with individual centers and the strategy during changes so they don't end up going down divergent paths?

**A.** Being clear on the strategy of the program is important before beginning the process. It will be communicated in the Federal Funding Opportunity (FFO) for the re-competition of the MEP system and the emphasis on demonstrating alignment is anticipated to be part of it. Reporting information will be streamlined to reduce center burden and improve communication with the system.

Mr. Lucas provided a brief overview on feedback from center board chairs, directors, and manufacturing associations:

- Overwhelmingly positive consensus
- Appreciation for plan's simplicity and flexibility
- Opportunities to improve, lack of specifics on:
  - center implementation
  - how Next Generation Strategies fit in

- metrics/ measurements of success
- how technology transfer fits
- how innovation fits

*Board comments*

- Strategic document should create backbone, not micromanage.
- Should include objectives achievable by all centers, not be too overarching.
- Ideas coming out of national labs need processes put together for SMEs, for innovation.
- Regarding lack of specifics, how do we ensure centers are implementing strategy correctly?

**Q:** Based on feedback, do we need to be more specific with connection to innovation?

**A.** We will ask centers to comment on it. We want to allow centers to make choices on how much innovation to stress in their business models, left it ambiguous to allow for flexibility.

**Q:** What fell off the table when making the strategy? Is it consistent with how MEP is organized?

**A.** Many stakeholders have legitimate equities in system. There's always a balance between federal direction and guidance, and local flexibility/accountability. MEP has struck the right balance based on strong bipartisan support and success across the nation. MEP needed to adjust the balance and it doesn't call for drastic reorganization, but that may happen later if adjustments call for it.

**Implementation Planning**

Ms. Wessel moved that the Board formally endorse the strategic plan. Mr. Church seconded. It was approved unanimously. Moving on to the plan implementation strategy, Mr. Lucas and Mr. Yakimov led the exercise on Board input for a strategy to achieve the objectives. The following Board comments were provided.

- How can the MEP system enable centers to make new manufacturing technologies usable by U.S. based small and mid-sized companies?
  - Identify gaps
  - Review outputs relative to SMEs.
  - Center asset mapping to identify opportunities
  - Speed dating/ matchmaking for centers
  - Create platform for partnerships
  - Identify innovation challenge

- Big picture/ niche activities
- Identify the problem
- Piece of technology/ company solution
- Use Board and meetings at labs to start connection
- Educate universities/labs on manufacturing needs
- How can the MEP system support workforce development and human capital through partnerships with existing organizations while leveraging the manufacturing expertise within MEP centers?
  - Communicate manufacturing workforce needs to universities, community colleges, adult education, workforce providers
  - Mapping who can deliver
  - MEP should not become the workforce provider but facilitate actions
  - Provide additional bandwidth to supplement
  - Align with Administration objectives
  - Addressing the needs of MEP
- How might we increase the connectivity between the National and center boards and help board members at all levels become greater champions for manufacturing?
  - Increase participation at board meetings/ invite others
  - Trade organizations host meetings- opportunity for SMEs to network
  - Include board in day to day activities of MEP
  - Be champions for manufacturing in day to day activities
  - MEP name brand in organizations is marketing tool- branding is key element to increase connectivity
  - Systematically ask centers what are most pressing needs of client base
  - Ensure alignment with boards and national strategy
  - MEP engage with centers in board development work
- How can we best implement a process that allows for the identification of center-specific metrics, and what might be quantitative for rewarding centers for regional economic value creation?
  - 4 goals not equal in size/scope
  - Enhancing competitiveness is most important
  - Components of evaluation flexible for centers to define
  - A lot of information out there is not distributed in a way to learn from
  - Collaboratively developed with national center and centers in field

## **Center Operating Models**

***Speaker: Mike Simpson, NIST MEP***

Mr. Simpson introduced presenters from 3 MEP centers for the presentations on business models and governance structures. He discussed overarching characteristics of the MEP system that highlight the diversity and influences on center business models. Key points:

- Centers are both unique and similar
- Drivers in three center models
  - University based systems- fiduciary responsibility is with the university
  - State based centers- fiduciary responsibility is with the state
  - 501c3- fiduciary responsibility is with the Board
- Importance of branding
- Cash flow- MEP is a cost reimbursement program
- Market coverage
- Sales delivery
- Partnerships
- Ideal balance of revenue sources is 1/3 state, 1/3 federal, 1/3 industry

## **IMEC**

***Speaker: Dave Boulay, President***

Mr. Boulay provided an overview of his blended 501(c)(3) center model in partnership with 4 universities. Key points from the presentation:

- IMEC's Board of Directors has a large manufacturing representation and 4 non-voting university leaders.
  - Hiring actions are through the universities- results in high benefits but lower salary
  - Offers institutional support, but flexibility in operations
- Rural vs. urban markets
- 50% of projects are done by staff, 50% by third parties and subcontractors
- Cash flow is not a challenge
  - IMEC is uniquely revenue-rich
  - Building expenditure base- finding the right people to bring on board is a slow process.

## **Georgia Tech**

***Speaker: Karen Fite, Director***

Ms. Fite provided an overview of the university-based GaMEP at Georgia Tech. Key points:

- Extension offices throughout state offer community outreach services
  - Huge market credibility with Georgia Tech brand

- University focus on technology
- Connections to Applied Research Centers
- University & Administrative support
  - 35% of contract revenue goes to Georgia Tech but GaMEP pays no rent
  - University handles contracting and cash management - lessens burden on director
- Activities must align with Georgia Tech strategic plan and NIST
  - Group managers ensure alignment with NIST
  - State relations managed with Georgia Tech liaison
- Advisory Board comprised of manufacturers, Georgia Tech staff, and partners
- Regional managers are considered sales staff but focus on developing relationships with clients
- Very strong state funding

## **NYSTAR**

***Speaker: Matt Watson, Director***

Mr. Watson provided insights into how Empire State Development (ESD) works as a public corporation in the state of New York and operates the MEP center NYSTAR, a division of ESD.

Key points:

- NYSTAR taking steps to align programs with MEP
  - Addressing IP issues in university-based centers to help them bring companies into the universities.
- NYSTAR programs
  - Centers of Excellence- university-based high level research institutions address industry problems
  - Bring funding to support incubators
  - Computing
  - Hubs- collaborations between universities and companies
- NYSTAR is identifying manufacturers in each region and developing advisory committees
- Working on increasing state funding levels
  - Missing opportunities by focusing on companies based on match
- 10 regional centers operate as 501(c)(3)
  - Ears across state
  - Mix of fiduciary and advisory boards
  - Plans to increase representation of manufacturers
- Challenges
  - Contract issues

- Center unwillingness to cross boundaries- funding allocations based on performance
- With 10 directors there are challenges reaching consensus
- Opportunities
  - As a government agency the trust level opens doors
  - Many programs and opportunities in state for manufacturers
    - Making it easier for them to access resources
    - Fuzehub

## **MEP Workforce Initiatives**

***Speakers: Mark Troppe and Stacey Wagner, NIST MEP***

Mr. Troppe presented MEP background information and rationale for workforce initiatives.

- Historical context
  - 1990's saw a need to address skills and management issues in centers
  - WF working groups established
  - Definition problem persists around workforce services.
  - What is MEP's role?
- Activity in centers
  - training
  - layoff aversion
  - partnerships with Workforce Investment Boards (WIB) and community colleges
  - eco-system building activities
- Opportunity to define MEP's role in new strategic plan
  - Workforce relates to holistic view of companies
  - Center activity suboptimal
  - Fundamentals to be established
  - Secretary Pritzler's support of skills agenda
  - White House Jobs Driven Checklist
  - National need/interest
  - Rational for 1:1 cost share
    - Allows centers to experiment with new services

Ms. Wagner then provided insights into the work MEP is doing on workforce initiatives.

- Secretary Pritzler is supporting workforce in several ways:
  - Discussions on interagency work groups
  - Discussions on how to approach grants and initiatives
  - Aligning skills and business in workforce strategy
  - Jobs Driven Checklist that agencies use for funding on programs
    - Employer engagement
    - Connected training and education strategies
    - Labor market career information
    - Public-private partnerships

- Work-based learning
- Innovative Solutions

MEP's workforce strategy is focused on 3 activities:

- SMARTalent- cloud based software for business alignment
- Taxonomy of center workforce services- inventory of center activities to inform MEP and stakeholders
- Peer learning expansion- WF group being reinstated

How NIST support centers at the federal level:

- SMARTalent
  - Pilot with 12 centers testing a diagnostic module for small manufacturers
  - Provides reports for benchmarking
  - MEP review of data
  - Continue developing talent management software application
  - Aligns business goals with workforce investments,
  - Allows centers to consult on SMM workforce challenges
  - Captures trends in the way manufacturing operations are staffed

**Q:** Where is the database coming from that MEP is using to benchmark companies and how often is it refreshed?

- A. Everything is housed on the NIST server and its data pulled from O\*NET, Census, and Bureau of Labor statistics. It's updated once a year.
- Strategy for Skills
  - Working with NNMI and NSF ATE to deepen understanding of needed skills/credentials
  - America Makes- National Additive Manufacturing Innovation Institute (NAMII)
  - Involving MEP centers in cross-agency initiatives
    - training in sustainable manufacturing methods
    - energy efficiency
    - BCTEP
- Strengthen Partnerships
  - Community colleges
  - Workforce investment boards
  - MFG Day
  - Advanced Manufacturing Partnership 2.0 out of White House
  - Other federal agencies
- Aligned funding and activities
  - Jobs and Innovation Accelerator Challenge
  - Make it in America
  - FFO language and goal-sharing

- Ensure standard language in agency FFOs on skills to increase participation
- Certification- federal standardization
  - Working with ANSI-George Washington University
  - Disseminate information from the Manufacturing Institute
  - Participate on DOL Registered Apprenticeship Committee
- Supporting centers at the local level- formalizing processes to build on current strategies
  - SMARTalent implementation
  - Layoff aversion assistance with WIBs
  - Community college training partnerships
  - Manufacturing image activities
  - Conveying value of certification and skills
  - Partnership opportunities
  - Encourage innovation

Dr. Singerman then offered closing remarks on MEP's approach to workforce strategies. Key points:

- In the strategic plan MEP was careful not to impose new descriptive requirements on the centers.
- Many centers have already carved out appropriate effective workforce training and development programs.

**Q:** Regarding the piloting tool, will MEP have difficulty generalizing from the aggregate data that's gathered?

**A.** The information gathered will be used solely as a self-diagnostic to demonstrate where they are not aligned in terms of their workforce and management as a process within the operation. They don't need to give their MEP center the data. MEP analyzes the data for disconnects to discuss with clients and say how can we help? MEP gets all the aggregate data across the system. We do have some individual data that's given to us in a confidential and proprietary way and we list it as such. The data is complete –we will know the skills and job descriptions to understand trends in manufacturing skills.

**Q:** Where are you getting the data to tell me where I have gaps? How do you keep pace with changes in technology?

**A.** Two ways. One is through benchmarking with other companies. The other way is looking at standard processes for business and workforce. We take into consideration factors very specific to the client. We are not advocating one process, we are not making judgments. We find out how the business runs, what you're dissatisfied with, and how we can help. We will make changes as we get feedback and input from centers.

## **MEP Director Update on Activities**

**Speaker: Phil Singerman, Acting Director, National Institute of Standards and Technology**

Dr. Singerman discussed recent MEP activities and updates on the budget.

#### Manufacturing Technology Assistance Centers (M-TAC)

- MEP initiated 5 M-TAC pilot projects in 2014
- Teams of experts assist small manufacturers with technology acceleration, transition, and commercialization within the context of specific supply chains
- Period of performance: March 1, 2014- February 28, 2015
- Projects helping to inform MEP strategy for Supply Chain Technology Acceleration beginning in 2015

#### Business-to-Business Networks (B2B) on supporting industry collaboration

- Advisory Board requested that MEP evaluate all third party development contracts
- National Innovation Marketplace (NIM) evaluation showed single, nationwide contractor approach was not optimal
- NIM ceased operations in December 2013
- Permission from Congress to redirect FY 2013 TIP carryover funds to new set of B2B networks that provide virtual, regional marketplaces with appropriate frameworks
- Dr. Singerman consulted with the Board on the intent to use MEP's competitive award authority to offer a Federal funding opportunity that will include:
  - \$2.25 million available for up to 9 pilot projects
  - Centers will build on existing networks in their regions to learn what works
  - Examples: New York- Fuzehub; Pure Michigan Business Connect

#### Budget update

- MEP Appropriations history - mostly flat least 5 years
  - FY 2013 \$120
  - FY 2014 \$128
  - \$141 requested in FY 2015
- Expected projections of FY 2014 budget
  - Decrease travel for savings
  - Negotiate lower overhead rate
  - As a result of analysis third party contracts reduced funding
  - \$10.5 million additional investment in the centers
- President's Budget Request: Invest in America's long-term growth and competitiveness- Strengthens U.S. manufacturing and innovation
- House Appropriations Committee included \$130 million for MEP in their recent action

## Re-competition Plan

- In FY 2014, NIST management directed MEP to initiate a carefully planned, systematic, multi-year re-competition of the national system of centers.
- GAO recommends that Commerce's spending on cooperative agreement awards be revised to account for variations across service areas in demand for program services and in MEP centers' cost of providing services.

## Re-competition Process

- Planning to re-compete 6-10 states during demonstration phase
- States selected based on objective criteria- it is not performance based
- Issue single FFO for all eligible states in August
- Threshold criteria
  - States where MEP program has not been re-competed within last 10 years
  - States where NIST \$/SME is below MEP national average
- Quantitative criteria
  - Importance of manufacturing to the State's economy
  - Importance of the State's manufacturing sector to national economy
- Qualitative criteria
  - State support for manufacturing and MEP
  - States where MEP has gone through a recent refresh
  - Federal program requirements
- MEP is in the process of meeting with state officials to:
  - Share MEP's strategic planning effort
  - Understand State priorities
  - Discuss upcoming re-competition
- Meetings completed: Colorado, New Hampshire, Texas, Oregon, Indiana, and Michigan
- Meetings scheduled: Virginia, Connecticut, North Carolina, and Tennessee

**Q:** What's the review process for selection of centers?

**A.** Review panels have five people. We have a well-developed process with multiple layers.

**Q:** Is there some kind of weighting that will be applied?

**A.** Every center that's older than 10 years has to go through re-competition. Right now we're looking at which states. We may do 6-10 in the first round. This is a transition year, so we wanted to make sure that everyone has a full year of funding.

**Q:** Did the GAO establish the manufacturing center as a fundamental unit?

**A.** It was not that specific; they talked about individual agreements and gave an overarching assessment for MEP to have a better plan across all agreements.

**Q:** How much money do we assume will be shifted in the system by time this process is done?

**A.** Within our conservative budget we have about \$106 million available. The calculation is a proportional share approach per manufacturing establishment.

**Q:** What about when you are redistributing without re-competing to allocate funds?

**A.** Re-competition sets a mark. We have some flexibility. Language in the FFO allow for flexibility for specific adjustments within constraints to reduce disparity. As this unfolds, there will be funding available for one time supplemental for some centers to absorb without going through re-competition.

**Q:** When you did the proportional analysis focused on business establishments, did you compare it against other measures like manufacturing employment and value of manufacturing?

**A.** It all ends up about the same.

### **Board Discussion, Feedback, and Public Comments**

- MEP's mission is very sound and necessary, and can add value to manufacturers who take advantage of it.
- On the strategic planning efforts- extraordinary process, sound result.
- Thoughtful approach to re-competition planning process.
- MEP has effectively engaged the Advisory Board.
- Glad to see increased participation by center directors.
- The Board is interested in further exploring the following topics:
  - Workforce development issues
    - SMARTalent
  - Exports
    - Public/private partnerships
    - Regulatory issues
    - SMEs
  - Engineering design

Dr. Singerman then introduced Dr. Willie May, Acting Director of NIST. Dr. May made general remarks on his support for the MEP program and Administration initiatives, Secretary Pritzler's commitment, and plans to optimize NIST's laboratory research work for the program.

**Next Meeting**

The next Advisory Board Meeting is September 18, 2014.

**Adjournment**

With no further business, Mr. Church moved to adjourn, Ms. Cason seconded and Ms. Wessel adjourned the meeting.