MAKING AN IMPACT ON U.S. MANUFACTURING

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

MEP Advisory Board Meeting

March 7, 2017

Washington, DC

Agenda - *Morning*

Time	Topic	Lead
8:30 – 8:35am	Meeting Logistics	Cheryl Gendron, NIST MEP
8:35 – 8:50 am	Welcome, Introductions: Opening Remarks, Board and Audience Introductions, Introduce New Board Member	Vickie Wessel, Chair, MEP Advisory Board Phil Singerman, NIST Associate Director for Innovation and Industry Services Carroll Thomas, NIST MEP Director
8:50 – 9:30 am	MEP Director's Update	Carroll Thomas, NIST MEP Director
9:30 – 10:15 am	MEP Strategic Plan 2017-2022; *Update from board working committee*	Vickie Wessel, Chair, MEP Advisory Board Dave Cranmer, Deputy Director, NIST MEP Mike Simpson, NIST MEP
10:15 – 10:30 am	Break	
10:30 – 11:15 am	Connecting User Facilities and Labs with SMMs; *Update from board working committee*	Jeff Wilcox, Vice Chair, MEP Advisory Board David Stieren, NIST MEP
11:15 – 12:00 pm	MEP Learning Organization; *Update from board working committee*	Carolyn Cason, MEP Advisory Board Mary Ann Pacelli, NIST MEP Staff
12:00 - 1:15 pm	Lunch Break	

Agenda - *Afternoon*

Time	Topic	Lead
1:15 – 2:00 pm	Presidential Memoranda	Phil Singerman, NIST Associate Director for Innovation and Industry Services Earl Comstock, Director of the U.S. Department of Commerce, Office of Policy and Strategic Planning
2:00 – 2:30 pm	NIST MEP Brand Update	Carroll Thomas, NIST MEP Director Zara Brunner, NIST MEP
2:30 – 2:45 pm	Break	
2:45 – 3:45 pm	NIST MEP Advisory Board Governance • Ethics Briefing • Charter Update • Bylaws Draft	Vickie Wessel, Chair, MEP Advisory Board David Spence, Office of the General Counsel Dave Cranmer, Deputy Director, NIST MEP
3:45 – 4:00 pm	Wrap-up/Public Comments	Vickie Wessel, Chair, MEP Advisory Board Carroll Thomas, NIST MEP Director

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Welcome and Introductions

Vickie Wessel, NIST MEP Advisory Board Chair

Phil Singerman, NIST Associate Director for Innovation and Industry Services

Carroll Thomas, NIST MEP Director

MEP Advisory Board – New Member

Ms. E. LaDon Byars is the newest member of the MEP National Advisory Board.

LaDon is the President and CEO of Colonial Diversified Polymer Products, LLC of Dyersburg, Tennessee. Colonial Diversified produces high-quality rubber products for a wide variety of industries. LaDon is very active in the manufacturing community, has received many awards and is on the Advisory Board of the University of Tennessee Center for Industrial Services.

MEP Advisory Board – New Members

Welcoming in the Spring:

- Mr. Jim Wright, Owner and President of J.V. Manufacturing, Inc, Springdale, AR
- Mr. Chris Weiser, Vice-President of Operations for Proof Research, Columbia Falls, MT

Pending:

- Mr. Mitch Magee, Director of Engineering for PPG's Architectural Coatings, Wyoming, DE

Others…

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NIST MEP Director's Update

Carroll Thomas, NIST MEP Director

State of MEP – Director's Update

- Budget and Legislation Outlook
- Board and Staffing Changes
- MEP Centers & System Developments
- Programmatic Developments
- New Administration
- Integrated Vision of MEP

State of MEP – Director's Update

Budget and Legislation Outlook

- Budget Update / Continuing Resolution
- American Innovation & Competitiveness Act

NIST MEP FY 2017 Projected Spend Plan

(in the current Continuing Resolution)

	($ million)
House / Senate Marks /a	$130.0
<u>Less Planned Expenditures:</u>	
Rescission in CR	$ 0.9M
Center Renewals /b	$105.9M
System Support	$ 7.7M
MEP Staff/Overhead	$ 15.5M
	$130.0

Additional $15.7 in FY16 carryover supports second year of first round embedding projects, second round of embedding projects and third round of embedding projects, new performance-based rolling funding opportunity, additional contracts.

a) $76.0 Million available during the Continuing Resolution (amount calculated based on FY16 appropriated budget of $130 million), through 4/28/2017.
b) Renewals for all centers providing at least 12 months funding from FY 2016 / FY 2017 funds.

American Innovation & Competitiveness Act

January 6, 2017 - Became Public Law No: 114-329

- Makes 1:1 cost share permanent
- 3rd & 8th year panel reviews
- 5th year review to continue funding
- Recompetition after 10 years
- Community college representative on MEP Advisory Board
- Strengthened center oversight boards
- Reports about cost share changes – some require input from Board

Implementation of AICA

- How MEP plans to implement the change in cost share
  - Starting with the 7 Centers that were not in the competition tranches
- Changes that are being made to panel reviews
  - Purpose defined and process updated
- Advisory Board legislated changes made:
  - Now have 10 members; more will come shortly
  - Already in compliance one community college member

State of MEP – Director's Update

Board and Staffing Changes

- MEP Advisory Board
- NIST MEP Staffing

Board Member Changes

- Welcome New Member – LaDon Byars
- Welcome Potential Member – Mitch Magee
- Four members' terms end in May – Eileen Guarino, Tommy Lee, Vickie Wessel and Ed Wolbert
- Additional six members in process for April 30th meeting (including Mitch Magee, Jim Wright and Chris Weiser)
- New Chair – Jeff Wilcox in May
- New Vice Chair – Bernadine Hawes in May

MEP • MANUFACTURING EXTENSION PARTNERSHIP

MEP ORG CHART (FY17)

480 Carroll Thomas
MEP Director

David Cranmer
Deputy Director

Staff Resource Management
Missy Davis (AO) 480, 488)

481
External Affairs, Performance, & Support Division
Chancy Lyford, Chief

Team Admin
Monica Claussen
Jennifer Leon, Team Lead
Michele Montgomery
Carol Shibley
Jeffrey Singleton

Team IT Security & Support
Kathy Martin, Team Lead
Justin Mocca
Bryan Wade

481.01
Marketing & Communications Group
Kari Reidy, Group Manager
Nicole Ausherman
Zara Brunner
Cheryl Gendron

481.02
Manufacturing Research & Program Evaluation Group
Ken Voytek, Group Manager
Megean Blum
Stephen Campbell
Kim Coffman
Holly Jackson
Nico Thomas

Panel Reviews
Diane Henderson
Megan Spangler

486
Finance Management & Center Operations Division
Anne-Louise Marquis, Chief

Finance/Budget
Tony Gomez (AO 486, 487)
Autumn Hernandez (AO 481)

486.01
Center Operations & Financial Management Group
Mellissa Ayala
Nadine DeJesus
Sunni Massey
Hope Snowden
Gloria Solomon

487
System Learning & Management Division
Mike Simpson, Chief
(Dave Cranmer, Acting)

487.01
Regional Management Group
Beth Colbert
Jose Colucci
Wiza Lequin
Jeff Lucas
Gary Thompson
Phill Wadsworth
Tab Wilkins

System Learning
(Mike Simpson, Acting)

488
Programs & Partnerships Division
Mark Troppe, Chief
(Dave Stieren, Acting)

Samm Bowman
Doug Devereaux
Brian Lagas
Mary Ann Pacelli, Team Lead
Mark Schmit, Team Lead
Heidi Sheppard
Dileep Thatte
Pat Toth
Ben Vickery, Team Lead
Marlon Walker (Detailee)

State of MEP – Director's Update

MEP Centers & System Developments

- Competitions
- Embedding Projects
- Performance-Based Rolling Funding Opportunity
- Center Impact Reporting
- Financial Reviews with Franklin & Turner

Status of MEP State Competitions

MEP/Institute Embedding Pilot – Round 1 & 2 Awardees

California Manufacturing Technology Center	→	NextFlex, Flexible Hybrid Electronics
		Clean Energy Smart Manufacturing Innovation Institute
Illinois Manufacturing Excellence Center	→	Digital Manufacturing and Design Innovation Institute (DMDII)
New York State Department of Economic Development	→	American Institute for Manufacturing Integrated Photonics (AIM Photonics)
North Carolina State University	→	Power America
The University of Tennessee (Center for Industrial Services)	→	Institute for Advanced Composites Manufacturing Innovation (IACMI)
Massachusetts MEP	→	Advanced Functional Fabrics of America (AFFOA)
Pennsylvania MEP	→	America Makes
Michigan Manufacturing Technology Center	→	Lightweight Innovations for Tomorrow (LIFT)

Embedding MEP into the Manufacturing USA Institutes - Status

Required Request for Information Prior to Performance-Based Rolling Notice of Funding Opportunity (NOFO)

Per 15 USC 278k(f), MEP must consult with the MEP Advisory Board, and small and medium-sized manufacturers when developing projects to solve new or emerging manufacturing problems

- **Outreach efforts:**
  - E-Blast
  - Key Partners (State Science &Technology Institute (SSTI), Information Technology and Innovation Foundation (ITIF), National Association of Manufacturers (NAM) and other partners)
  - Center Directors & Board Members
- **Closed January 13, 2017:**
  - Received approximately 52 responses
- **Next Steps:**
  - Synopsis of Responses
  - Share with MEP Advisory Board Members
  - Post on MEP Website

Performance-Based Rolling NOFO

- Draft NOFO under NIST Review
- Target Publication – March/April 2017

Reporting Updates

- Change in client reporting
  - Provide an option for centers to report clients/projects that are served beyond the 1:1 Match.
- Survey response rate rose by 10 percentage points: rising from about 71% in Q1 2016 to 81% in Q4 2016.

Financial Reviews – Franklin & Turner

What we have done

- 9 Center Reviews Completed in FY2016
  - Delivered Consolidated Report to Congress in August 2016
- 7 of 10 Center Reviews completed for FY2017
  - 3 Reviews in March
  - Consolidated Report will be presented for the 2nd year by May 2017
- Internal Process Review of NIST MEP and NIST Grants Management Division (GMD)
- Internal draft SOPs created for Cooperative Agreement Management and Product Development Policies and Procedures
- Creating an A-133 Compliance Supplement for the MEP Program. Working with GMD and FALD.

New Reviews in 2017

- Completing contract for third and final year of contract. Will conduct an additional 10 Center Reviews starting in August/September 2017.

Next steps

- Finalize SOPs and present to staff.
- Provide Consolidated Reports (2016 and 2017) to MEP System to share findings.
- Overview of findings at MEP Summit.

State of MEP – Director's Update

Programmatic Developments

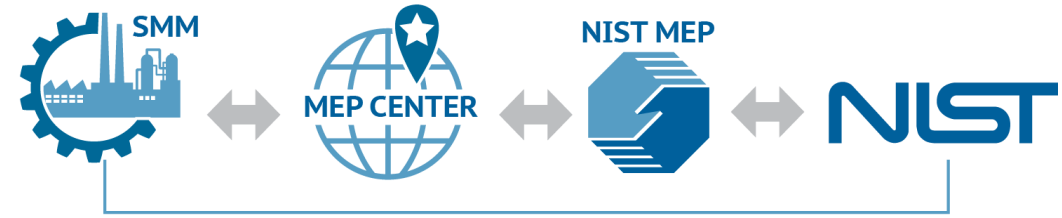
- 2017 MEP National Summit
- Branding
- MATTR
- Memoranda of Understanding- DOE and APTAC

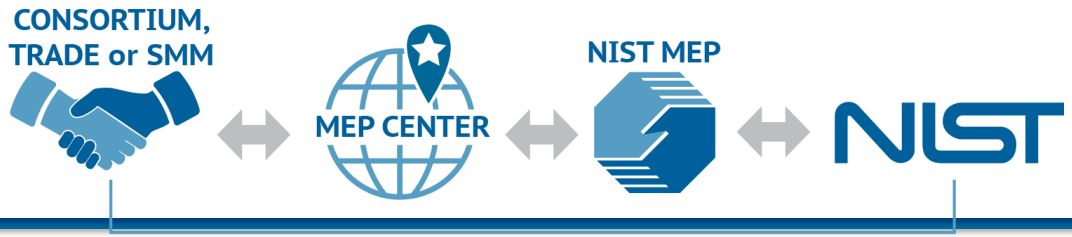
2017 National Summit, Denver CO

- Board Dinner – April 29th / Board Meeting – April 30th
- Networking Event & Launch of Brand – April 30th
- Summit – May 1st – May 3rd (~60 breakout sessions)
- Anticipate 400-500 attendees
- Confirmed keynote speakers:
  - Jay Rogers, CEO Local Motors
  - Thom Singer, Author and Professional Speaker, with expertise in Building Professional Social Networks
  - Matt Tyler, President / CEO Vickers Engineering
  - Cindi Marsiglio, VP of U.S. Manufacturing, Walmart

MATTR

- MATTR = MEP-Assisted Technology and Technical Resource
- The vehicle by which to connect SMMs with NIST lab expertise





Partnerships with Department of Energy & APTAC

- MOU with Department of Energy
  - Similar to NIST MEP MOU with DOD that provides a framework for MEP working with Mfg USA Institutes
  - Signed February 28th
- MOU with Association for the Procurement Technical Assistance Centers (APTAC) to promote collaboration.
  - Signing on April 12 in San Diego, CA

State of MEP – Director's Update

New Administration

- New Secretary
- Presidential Memoranda
- Manufacturing
- Increasing DOD Budget

New Administration

U.S. Department of Commerce-

Secretary Wilbur Ross confirmed 2/27/17

MEP's involvement in Presidential Memoranda

- **Regulations**
- **Dakota/XL Pipeline**

Great News for MEP!

Key Priorities are MEP Key Value Adds

- **Manufacturing**
- **Jobs**
- **Infrastructure**

Making American Manufacturing Great!

MAKING AMERICAN MANUFACTURING GREAT

MEP • MANUFACTURING EXTENSION PARTNERSHIP

In 1988, Congress passed and President George H. W. Bush signed the Omnibus Trade and Competitiveness Act to establish what has become the Hollings Manufacturing Extension Partnership program (MEP). MEP is part of the National Institute of Standards and Technology (NIST), a U.S. Department of Commerce agency. As a public-private partnership, MEP executes its mission of enhancing the productivity and technological performance of U.S. manufacturing by operating a national network of Centers located in all 50 states and Puerto Rico. With thousands of manufacturing experts across the Nation, MEP Centers provide hands-on, direct technical and business assistance to thousands of small and mid-sized U.S. manufacturers each year.

MAKE IT IN AMERICA
MANUFACTURING EXTENSION PARTNERSHIP

SUCCESS AS A PUBLIC/PRIVATE PARTNERSHIP

MEP is built on a successful model of using federal funds matched with state and industry dollars to create a unique program which produces a return on investment of $17.9 in new sales growth for every federal dollar and creates one manufacturing job for every $1,501 of federal investment.

Since 1988, MEP Centers have worked with more than 94,033 manufacturers leading to $98.7B in sales, $17.1B in cost savings, and more than 884,596 jobs.

MAKE IT IN AMERICA FOCUS

SUPPLY CHAIN

The global competitiveness of U.S. manufacturing depends on the performance of companies at all levels or tiers of a supply chain. By working with supply chains and with individual manufacturers, MEP provides high- performing supply chains with the capability to develop, manufacture, and distribute new or improved products more rapidly. MEP supply chain support capitalizes on MEP's ability to provide localized assistance on a national scale to maximize the overall impact at both the individual supplier and overall supply chain levels.

RESHORING - KEEPING JOBS IN AMERICA

MEP works with U.S. manufacturers to bring back manufacturing jobs to America. MEP shows companies the value proposition associated with where they choose to locate production, helping companies understand that when they manufacture products in the U.S. it means enhanced capabilities and growing jobs with good wages. MEP helps companies holistically understand how domestic versus foreign production impacts their business. The Total Cost of Ownership Estimator tool provides manufacturers with an ability to assess their total product lifecycle costs of offshoring – beyond production unit cost per manufactured item – and the Access Cost Everywhere tool also used by MEP outlines real costs and risks of offshore production.

WWW.NIST.GOV/MEP • 301-975-5020

SUPPLIER SCOUTING

MEP operates a process that effectively taps into unparalleled contact with and understanding of U.S. manufacturing that resides in the national network of MEP Centers. Leveraging the direct contact that MEP Centers have with our Nation's manufacturers, MEP Supplier Scouting identifies domestic manufacturers that have the capabilities and capacities to meet difficult, hard-to-source supply needs of domestic supply chains, including those of large companies and government agencies. Since 2009, MEP has successfully helped ensure nationwide compliance with the Buy America provisions in procurements of multiple federal agencies. MEP Supplier Scouting has also identified and assisted veteran-owned and service-disabled veteran-owned small businesses to position them as trusted suppliers in our Nation's supply chains.

- $108M in new business opportunities
- 184 items scouted
- 70+ suppliers identified

RURAL MANUFACTURING

MEP's partnership model and national footprint uniquely position the program to reach rural manufacturers. Manufacturers making products anywhere in the country are within a few hours' drive of an MEP point of assistance. This ability to gain access to MEP services was cited as a factor for manufacturers in choosing MEP according to a recent survey conducted with manufacturing clients. Of the 1,872 clients in rural areas that were selected for survey, 1,394 clients responded (85.2% response rate). Rural clients represent around 1 in every 5 clients served by MEP (around 21% of all clients). Results for rural manufacturers include

- $508.6M in new sales
- $1.462B in retained sales
- 4,405 new jobs and 15,941 retained jobs
- $861.1M in new investment

TECHNOLOGY AND CYBERSECURITY

MEP field staff operate as trusted, go-to advisors for U.S. manufacturers. When MEP Centers work with manufacturers on technology-related issues, their focus is on infusing technology, interconnectedness, and disrupted perspectives into companies' production, business strategy, and manufacturing infrastructure connections. These perspectives are crucial in today's manufacturing world that is influenced by trends and technologies such as the industrial internet of things (IoT), intelligent manufacturing, and more. MEP also provides critical assistance to U.S. manufacturers to help them understand and mitigate the risks associated with cybersecurity-related threats to their manufacturing environments. MEP operates a robust array of partnerships and programs that connect MEP Centers and U.S. manufacturers with the Nation's sources of leading edge technology and technical know-how that manufacturers need to grow and compete. These include federal laboratories such as NIST and DOE National Labs, federal-private institutions such as the network of Manufacturing USA Institutes, and the research laboratories at the Nation's institutions of higher education.

WORKFORCE

MEP has long recognized that a solid workforce is key to the success of manufacturers. MEP has a strong focus on workforce hat assists manufacturers through partnerships with community colleges, associations, nonprofits, state agencies, and other entities with such activities as talent pipelines, skills certifications, internships, apprenticeships, HR policies, recruitment, and work-based learning. MEP also partners with the National Association of Manufacturers and its Manufacturing Institute to promote skills certification for entry-level positions, and to build a successful workforce for the future.

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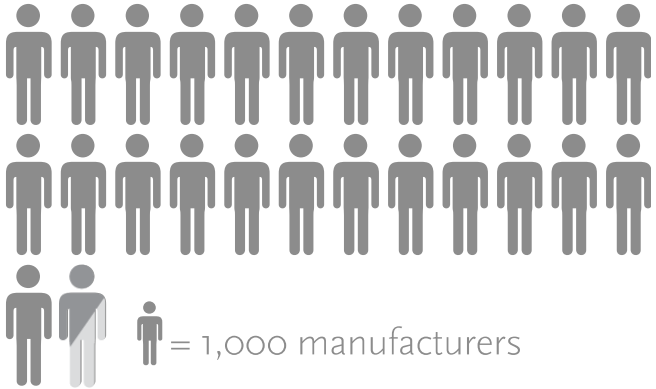
Delivering Impacts for Clients

25,445

Manufacturers reached in FY16

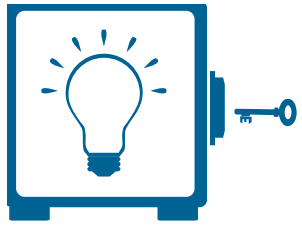


JOBS RETAINED	JOBS CREATED	NEW CLIENT INVESTMENTS	COST SAVINGS	RETAINED SALES	NEW SALES
66,922	19,680	$3.5 Billion	$1.4 Billion	$7 Billion	$2.3 Billion

State of MEP – Director's Update

Integrated Vision of MEP

- Branding the System
- Integrating strategy, with near-term future focus and the MEP brand



Building the MEP National Brand

WHY

- Need consistency of messaging
- Need clear brand meaning
- 75% CENTERS want national brand recognition
- Continuity of strategic alignment
- Reach more manufacturers and deliver on mission

WHAT: *Building a brand identity/image for the MEP National Network*

to increase:

- national awareness and reach
- customer success / focus

and build:

- stronger, more effective alliances
- culture of value creation
- national brand curriculum

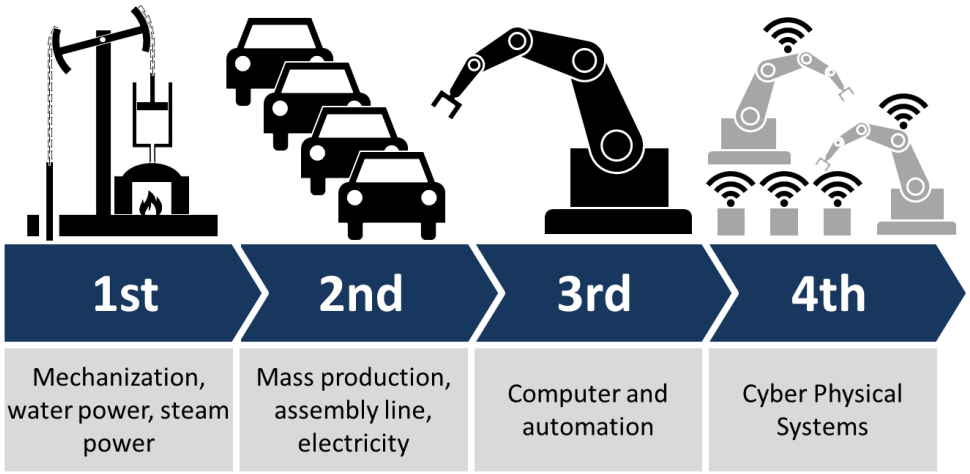
WHO: Everyone in the MEP National Network Value Chain.

Delivering superior customer value = Working together to create and enhance the value of the MEP National Network

MEP's Near – Term Future Focus

- National program emphasis on MEP being a GO-TO Trusted Advisor for U.S. manufacturers
- Focused on infusing *technology, interconnectedness, and disrupted perspectives* into:
  - ✓ Production
  - ✓ Business Strategy
  - ✓ Manufacturing Infrastructure Connections

Industrial Revolutions



"3-D-mentionalizing" the MEP System

As the catalyst for transforming U.S. manufacturing today and in the future!

MISSION

"To enhance the productivity and technological performance of U.S. Manufacturing."

Vision

Strategic: Goals and Plan

Future is Now: Forward Focused Networked System

Brand: America's "Go-To" Trusted Advisor for Manufacturing

Changing the Way the World Defines Manufacturing

Thank You!

MAKING AN IMPACT ON U.S. MANUFACTURING

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U.S. Department of Commerce

MEP Advisory Board Strategic Planning Sub-Committee

Vickie Wessel, NIST MEP Advisory Board Chair

Dave Cranmer, NIST MEP

Mike Simpson, NIST MEP

Overview

- Timelines
- Summaries from Stakeholder Meetings
- Summary Feedback from Stakeholders
- Proposed Structure of the Plan
- Vision
- Mission (Current & Proposed Changes)
- Themes and Objectives
- Format of the Detailed Plan
- What is Next?

Strategic Plan 2017 Process Update

- MEP Advisory Board Strategic Planning Committee
  - Started last March to update the prior plan
  - Committee
    - Vickie Wessel, Board Chair
    - Bernadine Hawes, MEP Board member
    - Eileen Guarino , MEP Board member
    - Dave Cranmer, Co-chair
    - Mike Simpson & Wiza Lequin, Staff
  - Conducted feedback sessions with several groups of stakeholders (CD, Ctr Boards, Practioneers, NIST MEP Staff and RFI)
  - On track for a revised implementation plan by end of March

Implementation Plan Timeline

Sept 2016 – Jan 2017	• Gathered Input from the MEP Board, Center Directors, Center Boards, Staff, and Partners
Jan 2017	• Drafted Implementation Plan
Feb-Mar 2017	• Committee Reviewed Implementation Plan Progress – 3/2/2017 • Revise and Complete Review of Implementation Plan, NLT 3/23/2017
Mar-Apr 2017	• Finalize Implementation Plan • Obtain Full MEP AB concurrence, as well as partner and stakeholder feedback; April 15th
2017-2022	• Execute Implementation Plan • Review and update every two years prior to the MEP Summit

Timeline – Gathering Stakeholder Inputs

Mar 2016-Mar 2017	• MEP Advisory Board (including follow-on committee meetings)
Nov 2016–Jan 2017	• Future is Now Group (Center Directors and Center Staff, 4 meetings, 2 face-to face meetings, 2 Teleconferences)
Nov-Dec 2016	• Center Directors and Board Chairs (9 calls completed: 52 participants, 46 centers)
14 Dec-Jan 13, 2017	• RFI (53 Responses, 12 SMMs, 11 large companies, 3 associations, 4 vendors, 2 universities, 1 agency, 13 MEP Centers)
Jan 23, 2017	• MEP Staff and Managers (37 Staff members including Leadership)
March 2017	• Final Thoughts and Comments (NIST MEP Managers & Staff, Advisory Board)

Summary Regional Strategic Plan Discussion

General comments and observations	Four Strategic Pillars - general comments that all 4 pillars are strong ; most centers used NIST strategic plan as a baseline for own center strategic plans			
	Enhance Competitiveness	Champion Manufacturing	Partnerships	Develop Capabilities
-Challenge is how mission is actually implemented -MEP needs greater agility -current format works well -Center Directors volunteered to support development of plan -how have we measured progress in each pillar; what metrics? 4 pillars but measures only 1 -Need a timeline -talk about small & rural manufacturer -how does each pillar connect? -from planning into implementation and tying measures to Cooperative agreement -limit options not create -4 pillars speak to system, keep simple, this is who we are -Keep focus on helping manufacturer -center to center collaboration, sharing (maybe measure that at a high level to encourage centers to work together) -clarity where we need to be in 2-5 years helpful and what trying to achieve -strategic goals need to be exciting -consider cost and time when asking centers to take on new task and how they will monetize -is Strat plan for what NIST will do or influence what centers will do? -biggest thing is supply chain, Supply chain 4.0	-greater focus on understanding how technology is growing; -opportunity to be primary conduit of tech transfer-needs to be addressed -word Workforce not found in pillars -Big data, area MEP need to grow into -Centers need information that they don't have resources to develop -challenge getting our heads around Manufacturing 4.0 -identify trends that are coming down and develop capabilities -Emphasis on supply chain	-nothing addresses legislative outreach, important -branding -how do we remain relevant to our state and nationally? Need to accelerate this -promote nationally what NIST needs to do -**the** voice vs **a** voice of mftg -national brand that encompass the 51 centers	-ROI in each pillar -Need clarity of role of stakeholders/expectations -how do we share expertise across, where are 3rd party experts mentioned -objective around involvement in Manufacturing USA -objective on FIN group work	- data as a service not objective but tactic –(downplay) -what in the plan do we have for education & development of internal capabilities -succession planning, EL good, looking forward to EL 2.0 -focused internally, not sure what it does for manufacturers -maybe reword this objective, good to have internal focus -Nothing on financial viability of centers -see the word "system" but not see "network" -language around working together as a system need to be more intentional -learning organization

Attendees: 41 Staff 31 Centers Conducted by RMs and Dave Cranmer

Summary of Responses: Request for Information

RFI Responses (5 questions)

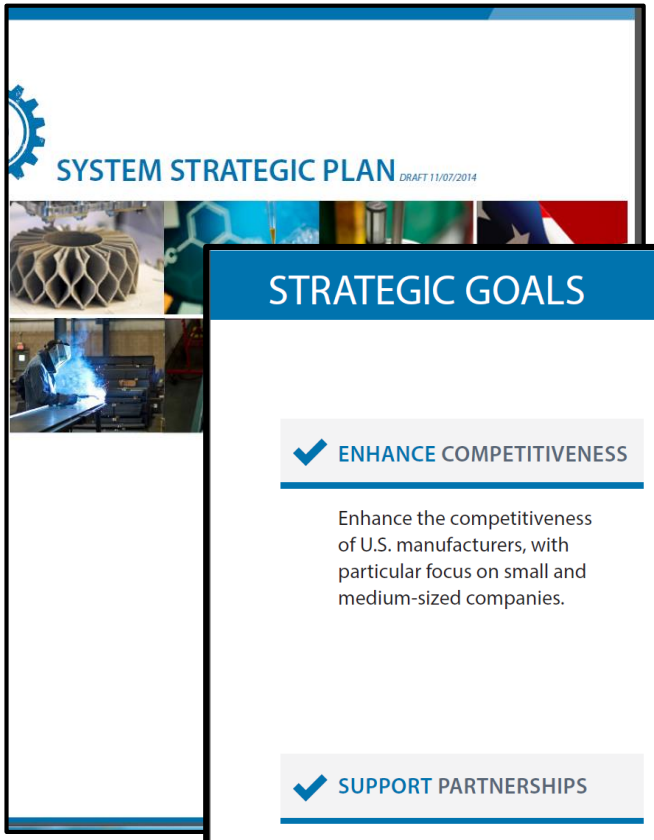
1) Key problems facing manufacturers 2) What advanced manufacturing technologies needed by manufacturers 3) Technologies/business models important to manufacturers to participate in supply chain 4) What business services needed by manufacturers at company or supply chain level 5) Critical issues to consider in MEP strategic plan not covered in first 4 questions.

11 Large companies	12 SMMs	7 Vendors/Associations	1 Agency/ 2 Universities	13 MEP Centers
-diminishing manufacturing sources and expertise -SMMs critical process accreditation -Company integration of Industry 4.0 technologies -adoption of new industrial technologies, push down to supply chain -information building workshops about advanced manufacturing technologies to SMMs -cybersecurity -Tax breaks -Big Data -Internet of things -SMMs do not have the tools and mechanics to manage supply base -ERP/MRP or other supply chain software -supplier evaluation -Stakeholders involvement	-finding right people with right skills -price of commodities and foreign policies -lack of infrastructure spending -access to usable data and information and training to understand place in supply chain -decision support systems to bridge gap in expertise & training -best practices -Automation -Government regulations -metrics, methods -key critical success factors related to performance -inventory management -capabilities across secondary and tertiary supplier networks -need to be heard -clean green and small parts manufacturing technologies -educate children about manufacturing	- SMMs have little understanding of how to build a supply chain -enabling technologies -access to critical manufacturing technologies and important resources, SMMs should not have to develop these themselves -SMMs business model -credentialing workforce -Manufacturers lack understanding of the pace of exponential change -threat of foreign suppliers -SMMs must have a voice in strategic planning process -Cost reduction and increased capacity	-Executive program on workforce skills and supply chain management -collaboration between industry, policy makers and higher education -cybersecurity -MEP and University partnership -understanding changing market demographics -CRM systems	-Incorporating critical emerging technologies -programs to teach workforce skills - business growth -technology advances from variety of sources -strategic planning -Enterprise Leadership -Growth -Productivity -critical process supplier accreditation in Aerospace and medical device industry -supply chain programs -access to capital -Robotics -Cybersecurity -Automation and Integration -Quality management -International supply chain management and analysis -Marketing -developing pipeline of talent -soft skills, Leading change -computer software

Summary of Feedback: Future is Now Group

FUTURE IS NOW GROUP			
Vision: Be the "Go-To" Organization for Manufacturing			
Network: System of Centers that collectively act on a national or regional basis to provide solutions to the future and current needs of small and medium-sized manufacturers			
Enhance Competitiveness	**Champion Manufacturing**	**Support Partnerships**	**Develop Capabilities**
Make U.S. Manufacturing dramatically more successful	Serves as a voice to/for manufacturing/manufacturers	Support national, state, and regional manufacturing eco-systems and partnerships	Develop MEPs capabilities as a learning organization and high performance system

Structure of the Current Strategic Plan



STRATEGIC GOALS

ENHANCE COMPETITIVENESS

Enhance the competitiveness of U.S. manufacturers, with particular focus on small and medium-sized companies.

CHAMPION MANUFACTURING

Serve as a voice to and a

SUPPORT PARTNERSHIPS

Support national, state, and regional manufacturing eco-systems and partnerships.

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 manufacturers ("SMEs").
- Enable centers to make new manufacturing technology, techniques, and processes usable by U.S. based small and medium-sized companies.
- Develop "Data as a Service" for Competitive Advantage.

Summary of Feed Back Sessions

- **Audience -** NIST MEP, Center, Both, Who Else?
- **Detail –** Definition below the Strategic Objectives?
- **Measures -** What are the Measures of Success?
- **Prioritization –** What's Needed, When and by Whom?
- **Workload-** How does my Work fit into the Plan?
- **Resourcing -** Not Enough Resources to do it all
- **Alignment –** With FIN, Brand, Working Groups, Summit, MEP Centers, NIST MEP

Structure of the Proposed Plan

Executive Summary

Detailed Plan

5-year Milestone

FY	SG 1 – Enhanced Competitiveness	SG 2 - Champion Manufacturing	SG 3 - Support Partnership	SG 4 - Develop Capabilities	Performance Measure
2017- 2018	• SO 1 • SO 2 • SO 3				
2019 - 2020	• SO 1 (cont) • SO 3 (cont) • SO 4				
2021 – 2022	• SO 4 (cont) • SO 5				

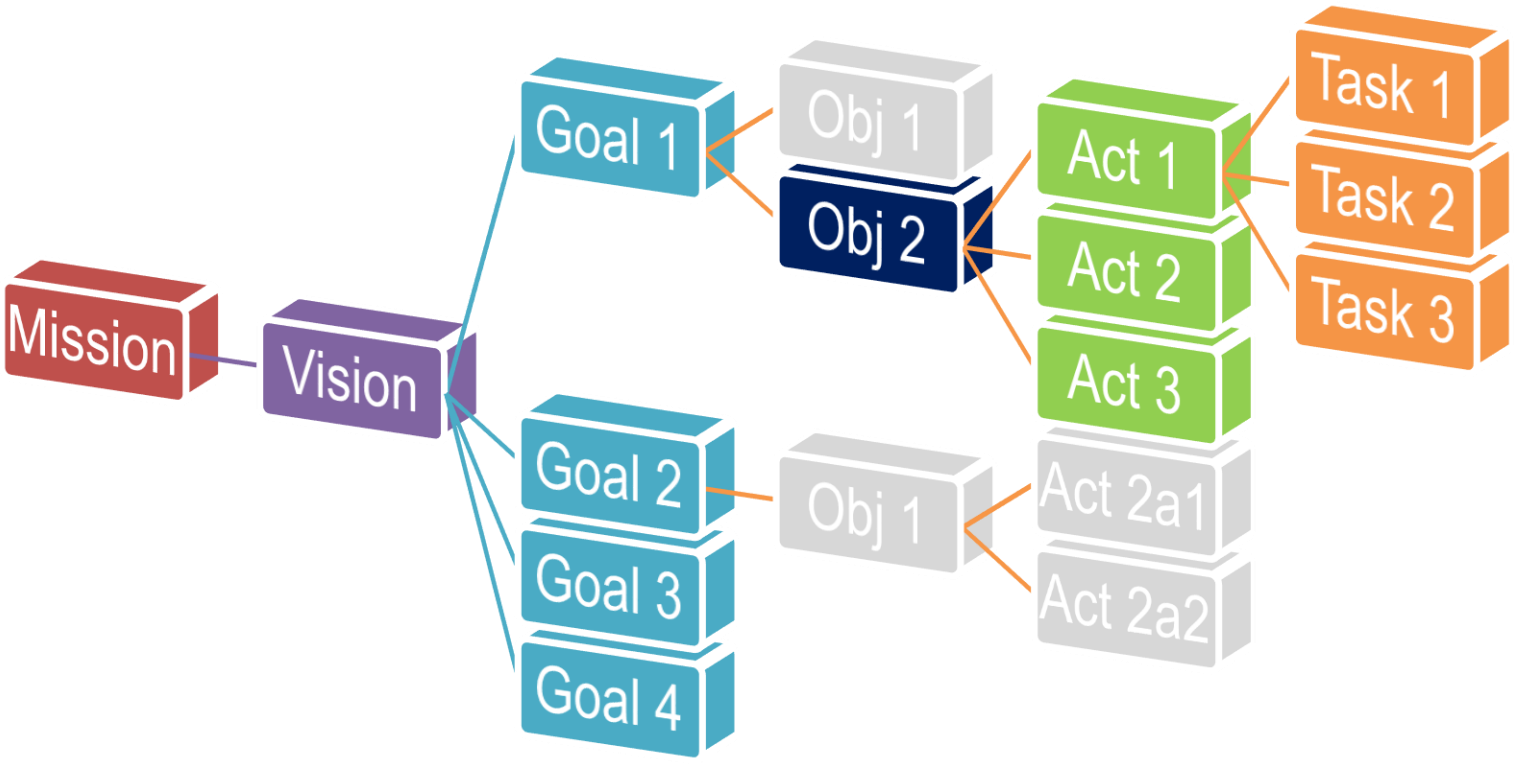
2017-2018 – SG 1

Strategic Goals and Measures	Strategic Objectives	Activities	Tasks	Staffing and/or Contracts	Sucess Measures
SG 1	SO 1	Activity1	Task 1	NIST MEP	TBD
		Activity 2	Task 1 Task 2 Task 3	MEP Center NIST MEP Working Grp	TBD

Why have a Strategic Plan?

- **Purpose -** The purpose of this strategic plan is to provide long-term, program direction for MEP Network and to unite and align stakeholders, partners, management and staff with this direction. Provide guidance on what NOT to do as well as what to do.

Implementation Plan Structure
(Strategy and Operations)



Mission Statement (aka Core Purpose)

The core purpose is the reason that MEP exists. It is a self-imposed duty that reflects our reason to work, captures the essence of MEP's soul, and should last 100 years no matter how technology or business practices change.

- **Current Mission – Enhance the productivity and technology performance of US Manufacturing**

- **Proposed Mission – Act as the catalyst for strategically transforming U.S. manufacturing industries and supply chains to continually position U.S. manufacturing for growth in the global marketplace.**

An agile and robust manufacturing capability is the critical asset required in any economy's ability to fuel continued advances in the standard of living of its population. We achieve our core purpose by enabling U.S. manufacturers to be the recognized world leaders in **efficiency, technology, and growth** where technology enables process innovation and new product development, leading to enhanced productivity and profitability.

Why have a Vision Statement?

- This strategic plan is intended to clearly define the shared beliefs, values, direction, and envisioned future for MEP.
- This strategic plan supports and is aligned with MEP's vision.
- The vision is a set of beliefs and outcomes that are shared by employees and stakeholders; they remain constant over a very long time, decades or more.
- The beliefs include the mission (core purpose) of MEP and its core values.
- The primary long-term outcome is described in a five-year vivid description of what MEP can accomplish.

Vision Statement

A vision represents the mission, values and future state of MEP. The vision includes MEP's:

- Core Purpose and Core Values,
- Driving Force,
- Significant Long-Term Goal, and
- Five-Year Vivid Description.

Core Values (from the Brand Project)

The core values are the few strong and enduring beliefs that MEP holds to be true. They are the beliefs that are most important to the MEP brand and require no external justification. We hold ourselves and each other accountable to these stated values and will not compromise them.

Needs of Industry:	**We are passionate about advancing manufacturing.**
Customer Focus:	**We care deeply about serving manufacturers.**
People:	**We empower one another through collaboration.**
Excellence:	**We are rooted by our deep experience in manufacturing.**
Results Driven:	**We are not afraid to roll up our sleeves.**
Accountability:	**We look ahead to the future of manufacturing.**

Driving Force

The driving force is the singular force or motive that propels the network and determines the nature of MEP's products, customers, market segments, and geographic areas. There can be only one driving force.

U.S. Manufacturing must Continuously Grow Globally in order to ensure the long-term strength of U.S. Manufacturing and the U.S. Economy.

(If not us, then who?)

Significant Long Term Goal

A significant long term goal, is the rallying cry for the network. Attainment of the goal is almost unimaginable, it is so big and awesome – and yet if it were attained, we will have made an incredible leap toward achieving our core purpose. The timeframe for this goal is consistent with the vivid description.

For example-

We are the go-to/first-call transformational resource for U.S. manufacturing, and impact 4x the number of SMMs across the country by 2027.

Five -Year Vivid Description

Changing the Way the World defines Manufacturing …

- U.S. Manufacturing – Companies need to embrace the Mfg 4.0 approach in order to compete globally
- MEP's – Today's Trusted Advisors need to evolve in order to Strategically Transform More Manufacturers to be able to Compete Globally
- MEP System – Known and Understood by all Manufacturing Stakeholders

Current Plan 2014-2017

✔ ENHANCE COMPETITIVENESS

Enhance the competitiveness of U.S. manufacturers, with particular focus on small and medium-sized companies.

✔ CHAMPION MANUFACTURING

Serve as a voice to and a voice for manufacturing and manufacturers in engaging policy makers, stakeholders, and clients.

✔ SUPPORT PARTNERSHIPS

Support national, state, and regional manufacturing eco-systems and partnerships.

✔ DEVELOP CAPABILITIES

Develop MEP's capabilities as a learning organization and high performance system.

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 manufacturers ("SMEs").
- Enable centers to make new manufacturing technology, techniques, and processes usable by U.S. based small and medium-sized companies.
- 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 SMEs 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 and Partnerships

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.

Themes

ENHANCE COMPETITIVENESS

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STRATEGIC OBJECTIVES:

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- Evolve MEP Performance System.
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- **Transform Manufacturing**
  - Global Competition
  - Transformational Services
  - Trusted Advisor for Transformation
  - Growth Services
  - Mfg 4.0 and Beyond
  - Supplier Development
- **Image and Identity**
  - Manufacturing Day
  - Go-to Organization
  - Branding
  - Image of Manufacturing
  - MEP Advisory & Ctr Board Engagement

- **Process Innov. & New Products**
  - Process Innovation through Technology
  - New Product Development
  - Technology Awareness
  - Technology Deployment
  - Manufacturing USA
  - Embedding Staff in NNMIs
- **Infrastructure**
  - Manufacturing Ecosystem
  - Ctr vs Network vs System
  - Learning Organization
    - MEP University
    - Communities of Practice
  - Summit
  - Market Knowledge
  - Market Intelligence

5-year Milestone

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2017-2018 – SG 1

Strategic Goals and Measures	Strategic Objectives	Activities	Tasks	Implementation Responsibility	Success Measures
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		Activity 2	Task 1 Task 2 Task 3	MEP Center NIST MEP Working Grp	TBD
	SO 2	Activity 1	Task 1 Task 2 Task 3		TBD

What is Next?

Week of March 19th

- Discuss Revised Plan with the Committee
- Update Plan and Send to Full Advisory Board for Comments

Week of March 26th

- Share Updated Plan with initial focus groups for feedback

Week of April 9th

- Obtain Full MEP Advisory Board concurrence
- Prepare Final Draft for NIST Leadership Review and Comments

Week of April 15th

- Finalize Implementation Plan, and Submit for Final Approvals

2017-2022

- Execute Implementation Plan
- Review and update every two years prior to the MEP Summit

THANK YOU!
COMMENTS & QUESTIONS?

MEP Advisory Board Strategic Planning Sub-Committee

Morning Break

MAKING AN IMPACT ON U.S. MANUFACTURING

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U.S. Department of Commerce

Connecting User Facilities and Labs with SMMs

Jeff Wilcox, NIST MEP Advisory Board Vice Chair
David Stieren, NIST MEP

STRATEGY DRIVERS: Leveraging MEP to Connect Small Manufacturers with NIST Laboratories

NIST National Institute of Standards and Technology U.S. Department of Commerce

MEP National Advisory Board

✓ *May 2015: MEP Technology Acceleration Implementation Plan Recommendations:*

"MEP should give priority to developing and implementing Technology Acceleration opportunities with NIST labs and National Network for Manufacturing Innovation (NNMI) Institutes over the next year, while also pursuing emerging collaboration with DOE labs."

✓ *March 2016: NIST Director Charge to the Board:*

"Guidance on the development of a protocol to connect user facilities, research, and technologies at NIST and other federal laboratories with small and mid-sized manufacturers..."

"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."

STRATEGY DRIVERS: Leveraging MEP to Connect Small Manufacturers with NIST Laboratories

NIST National Institute of Standards and Technology U.S. Department of Commerce

- **American Innovation and Competitiveness Act, Public Law 114-389 (2017)**

✓ *"The Director of NIST, …, shall develop and implement a comprehensive strategic plan for laboratory programs that expands*

(1) interactions with academia, international researchers, and industry; and

(2) commercial and industrial applications."

✓ *The objective of the [MEP] Program shall be to enhance competitiveness, productivity, and technological performance in United States manufacturing through*

(1) the transfer of manufacturing technology and techniques developed at the Institute to Centers and, through them, to manufacturing companies throughout the United States;

(2) the participation of individuals from industry, institutions of higher education, State governments, other Federal agencies, and, when appropriate, the Institute in cooperative technology transfer activities;

(3) efforts to make new manufacturing technology, processes usable by US-based small, medium-sized companies;

(4) the active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small and medium-sized manufacturing companies;

Since September Advisory Board Meeting in Detroit

- NIST MEP has re-examined its plans for connecting SMMs with NIST Labs
  - ✓ Result is preliminary design and initial pilot testing of ***MATTR*** to connect SMMs with NIST Labs thru MEP Centers – details follow in coming slides.
  - ✓ ***Dr. Marlon Walker***, a research chemist from the NIST Materials Measurement Lab, is serving a staff detail to NIST MEP and leading this effort
  - ✓ Clara Asmail has left NIST and is now working at the U.S. DOE.

Also Since September Advisory Board Meeting in Detroit

- NIST MEP has kicked off 9 pilot projects to embed MEP personnel at Mfg USA Institutes to
  - ✓ Transfer technology from Institutes to small U.S. manufacturers
  - ✓ Create approaches to engage small manufacturers in Institute work via hands-on assistance mechanisms, services such as those offered by MEP Centers
  - ✓ Develop and test business models by which MEP Centers and Institutes can serve needs of small U.S. manufacturers in Institute technology areas
  - ✓ Facilitate knowledge, best practice sharing between Institutes, MEP Centers
  - ✓ Cultivate an enhanced nationwide network of partnerships among Institutes and MEP Centers for benefit of small U.S. manufacturers
- NIST MEP is planning addl. NOFO to embed MEP personnel at remaining 5 Mfg USA Institutes where MEP personnel are not currently embedded.
- Brief details follow at end of this presentation

Connecting SMMs to NIST Labs: The Creation of MATTR

What is MATTR and why does MEP need to create it?

MATTR =

MEP-**A**ssisted **T**echnology and **T**echnical **R**esource

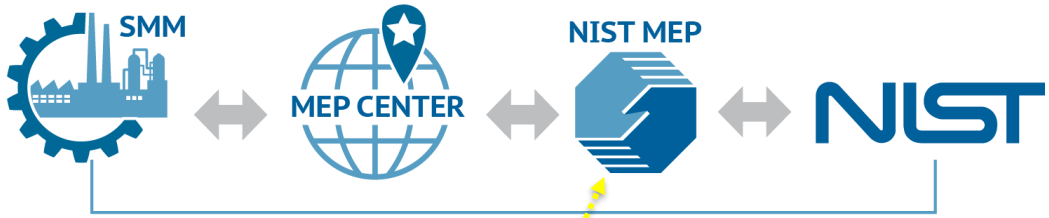
MATTR Is ….

- the vehicle by which technical expertise and resources of NIST Laboratories can be utilized by Small and Medium-sized manufacturers throughout the Nation

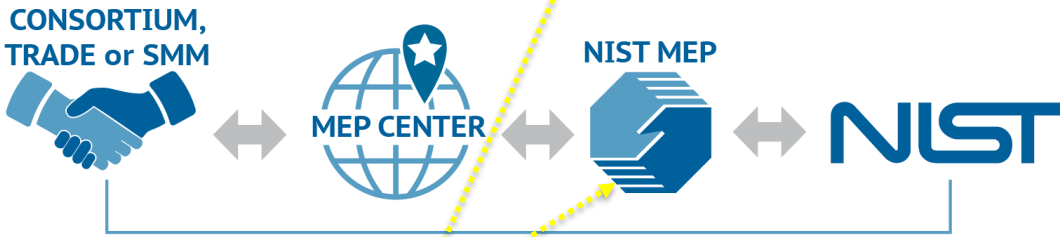
- a bi-directional conduit in which NIST staff can share NIST manufacturing technology with MEP center clients and learn needs of a manufacturing area to help focus and direct NIST research to help address these relevant needs

How Does MATTR Work?

Query and Connection: SMM-Initiated



Query and Connection: NIST Labs-Initiated



- The key to the MATTR mechanism is dedicated NIST MEP personnel conducting triage to field, document, respond to requests in either direction.
- NIST MEP triage is based upon understanding of and connections to NIST Lab capabilities, as well as MEP Center efforts
- Follow-up reporting is included, as well.

Requests to Initiate MATTR

SMM-INITIATED MATTR REQUEST FOR ASSISTANCE

Name of Manufacturing Company POC:

Date:
Phone:

Website:
Company address:
Description of company product line(s) and industries served:
Description of specific area where company is seeking assistance and specific assistance being sought:

Name of MEP Center POC and MEP Center:
Phone:
Email:

Date of NIST MEP MATTR Receipt of Request:
Forwarded to NIST Technical Staff? Yes No
If no, description why:

NIST staff contacted:
Phone:
Email:
Outcome:
Next steps:

Other comments from NIST MEP MATTR:

NIST LAB-INITIATED MATTR REQUEST FOR INFO

Name of NIST Division, Group, and POC:
Date:
Phone:

NIST email address:

Description of focus areas in which there are measurement science, calibrations, or standards needs:

Date of NIST MEP MATTR Receipt of Request:
Referred to which MEP centers and SMMs?

Referred to Trade groups and if so, which one(s)?

Forwarded to Consortia or Associations and if so, which one(s)?

If not referred, why?

Next steps:

Other comments from NIST MEP MATTR:

Identifying NIST Laboratory Capabilities

Marlon L. Walker, Ph.D.
Research Chemist, Materials Measurement Science Division
Material Measurement Laboratory, NIST
marlon.walker@nist.gov
301-975-5593

Current Research Interests: Engineered soft surfaces with tailored hydrophobic and/or oleophobic properties; functionalized Au nanoparticles for novel metrological applications; dynamic, real-time *in-situ* (liquid) spectroscopic ellipsometry of thin organic films, including characterization of protein adsorption resistance of such films, thiol/dithiol-terminated oligo(ethylene oxide) self-assembled monolayers .

Selected publications:

Rykaczewski, K; Paxson, A T; Staymates, M, **Walker, M L**; Sun, X D; Anand, S; Srinivasan, S; McKinley, GH; Chinn, J; Scott, J H J; and **Varanasi, K K; "Dropwise Condensation of Low Surface Tension Fluids on Omniphobic Surfaces," *Scientific Reports*, **4**, 4158, 2014.

Vaish A; Vanderah D J; Vierling R; Crawshaw F; Gallagher D T; ****Walker M L**; "Membrane Protein Resistance of Oligo(ethylene oxide) Self-assembled Monolayers" *Colloids and Surfaces B: Biointerfaces.,* **122,** *552,* 2014.

Vaish, Amit; Vanderah, David J; Richter, Lee J; Dimitriou, Michael; Steffens, Kristen L; and ****Walker, Marlon L**; "Dithiol-based modification of poly(dopamine): enabling protein resistance via short-chain ethylene oxide oligomers", *Chem. Commun.,* **51**, 6591, 2015.

Relevant equipment or techniques used in research:

In situ spectroscopic ellipsometry, spectroscopic ellipsometry, contact angle goniometry, scanned – probe microscopy, soft-surface modification

Steps Needed to Implement MATTR

- ✓ Focus groups of NIST scientific staff members *(Dec 2016)*
- ✓ NIST Division Chief Critique *(Dec 2016)*
- ✓ MEP Center input *(Jan-Mar 2017 / ongoing)*
- ✓ Associate Director for Laboratory Programs approval *(Feb 2017)*
- ✓ NIST OU Leadership Input *(Feb 2017)*
- **MEP Advisory Board Feedback *(Mar 2017 / ongoing)***
- NIST Leadership Board approval *(TBD)*
- Pilot program roll-out *(2017)*

Concluding Thoughts - MATTR

- **The simplicity of MATTR underpins its likelihood for success.**

  - ✓ NIST buy-in is happening bottom-up and top-down.
  - ✓ MEP Centers are kept in loop throughout process.
  - ✓ NIST MEP plays critical, value-adding role – bi-directional value add…
  - ✓ NIST MEP dedicates knowledgeable staff resources to operate MATTR.
  - ✓ Connections are based on person – to – person interactions, vs a complex system or database (which may eventually flow from MATTR ops…)
  - ✓ Overall MATTR value is bi-directional: SMMs to NIST Labs, and vice versa.

- **MATTR is authoritatively warranted and strategically important to MEP**

  - ✓ Critical to MEP success in becoming GO-TO Trusted Advisors to U.S. manufacturers enabling Manufacturing 4.0.

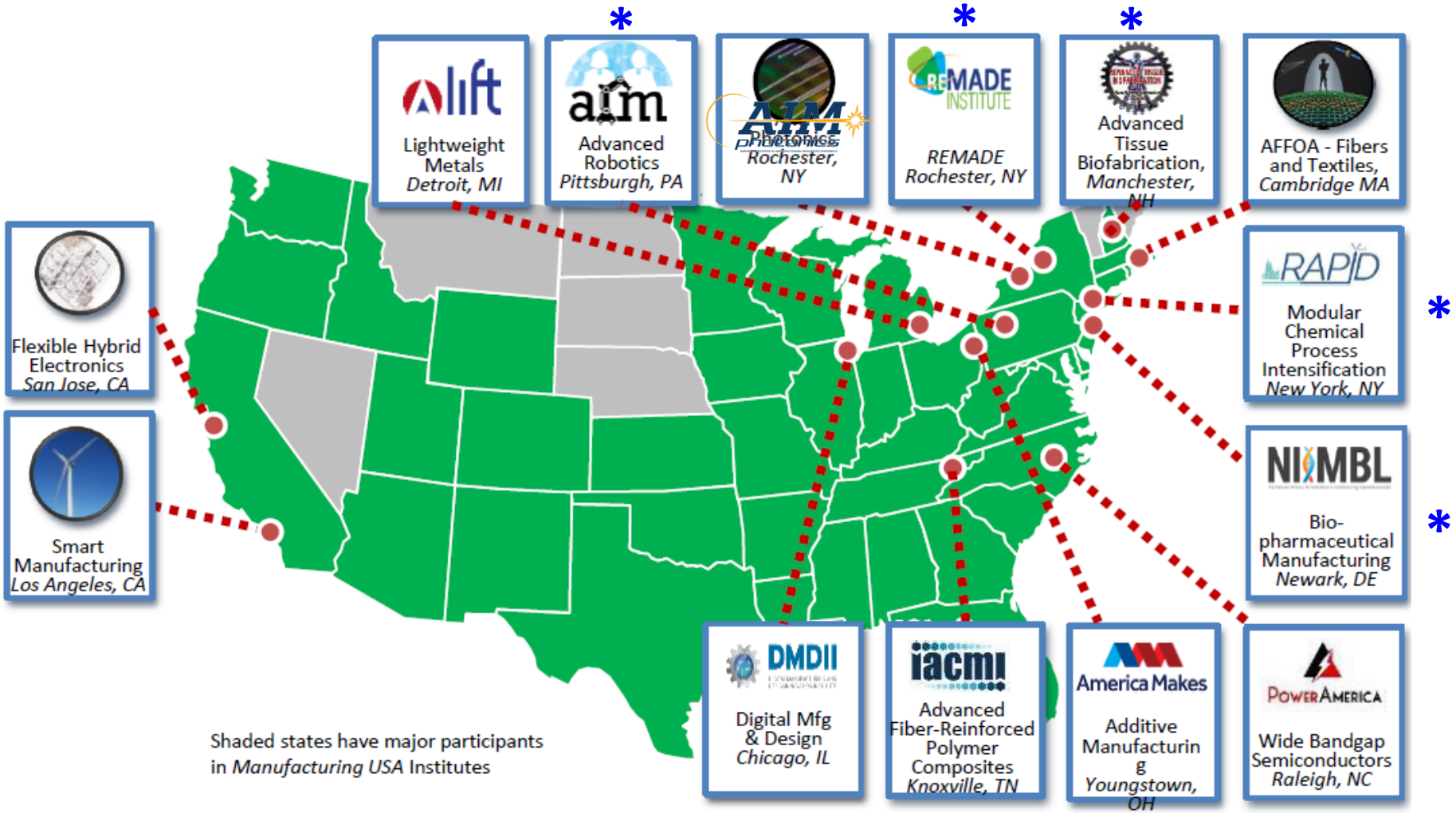
Embedding MEP into Manufacturing USA Institutes

Pilot Projects Underway

Lead MEP Center	Primary Manufacturing USA Institute
California Manufacturing Technology Center	NextFlex, Flexible Hybrid Electronics
	Clean Energy Smart Manufacturing Innovation Institute
Illinois Manufacturing Excellence Center	Digital Manufacturing and Design Innovation Institute (DMDII)
New York State Department of Economic Development	American Institute for Manufacturing Integrated Photonics (AIM Photonics)
North Carolina State University	PowerAmerica
The University of Tennessee (Center for Industrial Services)	Institute for Advanced Composites Manufacturing Innovation (IACMI)
Massachusetts MEP	Advanced Functional Fabrics of America (AFFOA)
Pennsylvania MEP	America Makes
Michigan Manufacturing Technology Center	Lightweight Innovations for Tomorrow (LIFT)

Embedding MEP into Manufacturing USA Institutes

Remaining Institutes Where MEP is NOT Yet Embedded (*)



Concluding Thoughts – Embedding MEP into Manufacturing USA Institutes

- **Manufacturing USA Institutes and MEP have mission-centric focus on U.S. manufacturers – especially small manufacturers**
  - ✓ Institutes need to connect with small manufacturers on large scale to maximize impact
  - ✓ The national MEP network provides hands-on assistance to thousands of small U.S. manufacturers annually – and has a focus on accelerating technology to small U.S. manufacturers

- **MEP Centers serve as trusted advisers to small U.S. manufacturers**
  - ✓ The portfolio of Embedding Projects has the potential to transform the Manufacturing USA approach to serving small U.S. manufacturers
  - ✓ The portfolio of Embedding Projects also has the potential to transform MEP's approach to serving small U.S. manufacturers

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

Questions / Discussion?

MAKING AN IMPACT ON U.S. MANUFACTURING

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

MEP Learning Organization

Carolyn Cason, NIST MEP Advisory Board

Mary Pacelli, NIST MEP

Agenda

- Current State
  - Survey summary
  - Focus group Analysi
- High-level ‘vision
  - Key components
  - Recommended priorities
  - Near-term actions -- potential
- Questions/Discussion

MEP Learning Organization

Learning Organization is embedded in one of the MEP Strategic Goals:

Strategic Goal 4:

- Develop MEP's capabilities as a learning organization and high performance system (Develop Capabilities)
  - Strategic Objective: Promote system learning
  - Strategic Objective: Continue administrative reform

The 2016 Charge to the MEP Advisory Board from Dr. Willie May:

Recommendations on the establishment of an MEP Learning Organization which would be a continuance and further development that came out of the Board Governance charge

- MEP plans to have the first comprehensive gathering of the Network since 2012 in 2017 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

MEP Learning Organization – Why?

To create a national framework to enable Center's to focus on and gain access to:

- best practices
- knowledge and education designed to enhance Center performance
- expanded market penetration
- technology transfer
- increased client top and bottom line performance

MEP Learning Organization – Who?

System

- Rapidly identify and transfer best practices
- Efficiently develop and share resources across centers

Centers

- Analyze gaps in service delivery and identify possible resources to remedy
- Establish a culture of continuous improvement
- Contribute to system learning

Staff

- Access development resources to gain capabilities
- Contribute to center and system learning

Charter: Advisory Board Sub-Committee on MEP Learning Organization

Purpose:

To provide guidance to shape the development of an integrated MEP Learning Organization.

Objectives: The Advisory Board Sub-Committee on Learning Organization will:

- Define the target audience
- Identify needs – needs analysis
- Asset Map of what's currently in the system
- Develop the key components of a long term strategy to include:
  - MEPU-type system
  - Network Summits and Updates
  - Working Groups and Communities of Practice
  - Define Metrics
- Prioritize key activities
- Identify resource needs

Schedule:

• Launch Sub-Committee initiate first meeting	May 5, 2016
• Confirm Charter and present draft to Advisory board	May 19, 2016
• Action Plan meeting	June 9, 2016
• Needs Analysis -- Survey	June – August
• Activity Update to board	Sept. board meeting
• Focus groups and analysis	Oct
• Draft plan/recommendations	Dec.
• Final Recommendation Plan	March 2017

About Learning Organization

Establish a mind set in the network to contribute to the expansion of shared knowledge for the continuous improvement of centers in their service to clients

Learning Organization: Culture, system, Sharing of knowledge across the network

MEP Team Contacts:

- Mary Ann Pacelli NIST MEP
- Jeff Lucas NIST MEP
- Dileep Thatte NIST MEP
- Megan Spangler NIST MEP

Board Committee Members:

- Carolyn Cason, Chair
- Kathay Rennals
- Tommy Lee

Opportunities for Center Input

- Survey
- Focus Groups
- CLT for planning
- Center participation in on-going plan and sustaining

Center Leadership Team - Volunteers

Tom Bugnitz-CO
Dusty Cruise -- MO
John Kennedy—NJ
Misty DePrist – TN
Pat Giavara--VT

Critical Issues:

- Center input to shape update meetings and National summit is critical
- To re-launch MEPU type system– will require outside resources. Need to consider timeline for inviting consultants

MEP Learning Organization

Center focused Learning

- MEP processes
- Staff Development
  - Strategic Planning
  - Coaching
- HR Support – succession planning, recruit/retain

Client focused Learning

- New Technology—Additive, Digital
- Client Services – TDMI, Lean, Export….
- C-level consulting
- New Program development

Future Tech focused Learning

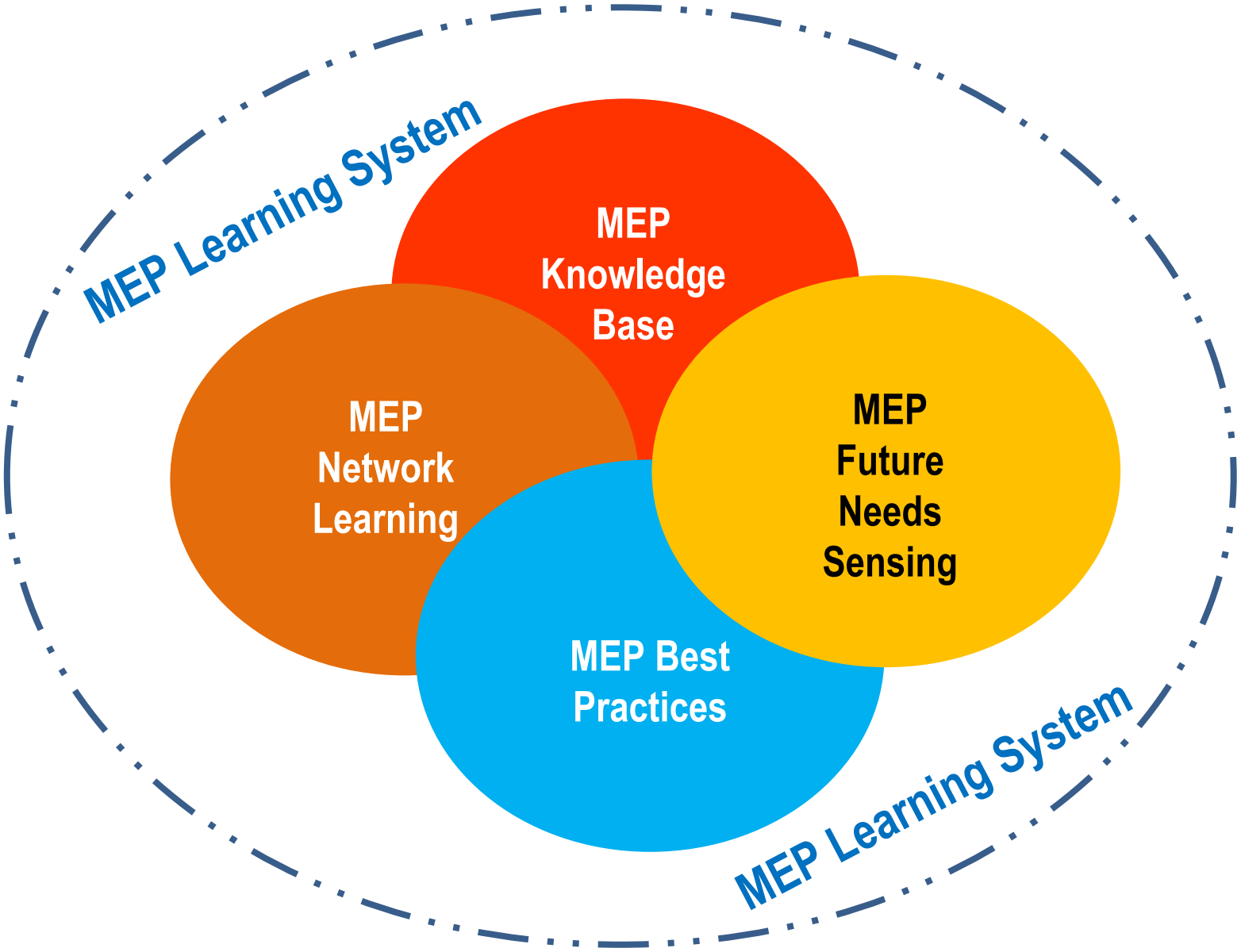
- Sharing Best Practices – Summits/conferences
- Working Groups
- Networking platforms (MEP Connect or other)

MEP Learning Organization – Survey

- Survey was distributed by FME via their email distribution
- Email distribution is to Center Directors and other Center Staff that are FME members
- Total number of respondents was 42
  - Cannot determine number of discrete center responses
- Summary Presented to Advisory Board in Sept.
- Next step plan – Virtual Focus group sessions
  - With Center Directors and Staff
  - Goal: Gain Clarification on survey responses

Center Focus Groups

- 4 opportunities: October 12th, 13th and 20th (am & pm)
- Total participation: 51
- Questions:
  - Clarification of needs for client services:
    - Operation excellence
    - Top Line Growth
  - Clarification of needs for Center Operations
  - Prioritization
    - What will give you biggest return in next 12 months
  - Are you interested in participating on an advisory team?


MEP Learning System
MEP Knowledge Base
MEP Network Learning
MEP Future Needs Sensing
MEP Best Practices
MEP Learning System

MEP LEARNING SYSTEM

MEP Knowledge Base

Programs to meet the needs of Client needs and Center operations.

- Define what
- Descriptions of content
- Does Course Exist?
- Make or Buy-Internal or external
- Team Vetting
- Keyword Searchable
- Make affordable
- Schedules
- Payments
- Materials
- Trainers
- Evaluation process – measure success

MEP Network Learning

Process to allow centers to connect to systems expertise

- Engage Community
- Capture Systems' Expertise
- Provide Guidance
- Process to Share Expertise
- Keyword Searchable
- Cross Center Mentoring (ex. Emerging Leaders)
- Community of Practice (s) – need to define and structure
- 2 Way Communications

MEP Best Practices

Clearing house

- Catalog of past summits, meetings
- Targeted Working Groups
- Tools/Resources (i.e. articles, blogs, recordings, etc.)
- *Static*
- 1 Way Communication
- Searchable, rated

MEP Future Needs Sensing

Process/system to gather and disseminate information to inform for trends, future development

- Trends/Informational
- Manufacturing USA
- National Labs
- External Sources

Processes needed: for startup, for sustaining, for evaluating success
Platform needed: access, info storage, info sharing, registration, tracking
Resources needed: staff to develop and implement, funding for platform, Staff for on-going content and upkeep

MEP Knowledge Base

Of programs, regulations, staff experts to share

- Define
- Descriptions
- Courses
- Provide Examples
- Does Course Exist?
- Make or Buy
- Team Vetting
- Keyword Searchable
- Make affordable
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- Tools/Resources (i.e. articles, blogs, recordings, etc.)
- *Static*
- 1 Way Communication
- Searchable, rated

This could become MEPU

- Need to determine platform
- Planning needs to define:
  - What gets in
  - How it gets developed or accessed – standards for development
  - Pay or not pay – would be TBD based on each program
  - Refresh/sustaining
- Needs fulltime resource attention
- Topics to include (based on surveys and staff input:
  - New Lean? -- Kata
  - ExportTech
  - TDMI/TS
  - Sales training
  - Project Management
- Programs could be developed in-house, outside, buy existing
- How does Emerging Leaders inform

MEP Network Learning

Process to allow centers to connect to systems expertise

- Engage Community
- Capture Systems' Expertise
- Provide Guidance
- Process to Share Expertise
- Keyword Searchable
- Cross Center Mentoring (ex. Emerging Leaders)
- Community of Practice (s) – need to define and structure
- 2 Way Communications

As a result of Future us Now meeting:

- These are important
- The Center FIN team/group to help in defining this
- Coordination would focus on tech platform first. We should coordinate looking for a package to meet needs of MEPU and networking, knowledge sharing

Some decisions to consider:

- Tech platform
- Formal vs informal – need to define
- Communities of Practice – define

Start up

- Outline an expert share plan
- Who to manage
- Centers responsibilities
- How does Emerging Leaders inform
- Key is coordination of this with Knowledge Base

MEP Future Needs Sensing

Process/system to gather and disseminate information to inform for trends, future development

- Trends/Informational
- Manufacturing USA
- National Labs
- External Sources

Process needed to continually identify future trends, translate to potential needs in centers, and inform Knowledge Base, Network Learning, Best Practices

Recommended Priorities

- MEP-U type System
  - Need a Technology Platform
  - Process to determine what should the content be
  - How to make it available
  - How to sustain it
    - Resources – staff, contractors, partners, technology
    - Ongoing for new content
- Continuous Learning: Communities of Practice, Working Groups
  - Guidelines for startup and maintenance
  - Resources
  - Evaluation of outcomes
- Networking
  - Summits/conferences
    - Resources, content, follow-up
    - Evaluation of outcomes

Current Actions

Current Planning Team:

- Drafting details of needs for a Technology Platform for MEPU – Planning team with PPD Team Lead for Systems Deployment
  - Critical components
  - Expectations
  - Drafting Statement of Work content for competitive bit release in late March/early April
- Draft MEPU content start up
  - Assemble an implementation team (MEP staff and center reps)
  - Develop Decision Matrix
  - Pilot the decision matrix with Tech Platform start up

Systems Learning and Management Group

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

Discussion

Thank You

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http://nistmep.blogs.govdelivery.com

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Lunch Break

Important Note: Non-Federal Employees, if *not* escorted by NIST MEP, please return to the Main 14th Street Entrance by 1:00 p.m.

MAKING AN IMPACT ON U.S. MANUFACTURING

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Presidential Memoranda

Phil Singerman, NIST Associate Director for Innovation and Industry Services

Earl Comstock, Director of the U.S. Department of Commerce, Office of Policy and Strategic Planning

RFI Questions -

Manufacturing Permitting Process:

- How many permits from a Federal agency are required to build, expand or operate your manufacturing facilities?
- Which Federal agencies require permits and how long does it take to obtain them?
- Do any of the Federal permits overlap with (or duplicate) other federal permits or those required by State or local agencies?
- If the answer is yes, how many permits? From which Federal agencies?
- Briefly describe the most onerous part of your permitting process.

RFI Questions -

Manufacturing Permitting Process:

- Briefly describe the most onerous part of your permitting process.
- If you could make one change to the Federal permitting process applicable to your manufacturing business or facilities, what would it be?
- How could the permitting process be modified to better suit your needs?
- Are there Federal, State, or local agencies that you have worked with on permitting whose practices should be widely implemented? What is it you like about those practices?

RFI Questions -

Regulatory Burden/Compliance:

- Please list the top four regulations that you believe are most burdensome for your manufacturing business. Please identify the agency that issues each one. *Specific citation of codes from the Code of Federal Regulations would be appreciated.*
- How could regulatory compliance be simplified within your industry or sector?
- Please provide any other specific recommendations, not addressed by the questions above, that you believe would help reduce unnecessary Federal agency regulation of your business.

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MEP Network Brand

Advisory Board Update | 3.7.17

“

WE ARE ALL TIRED OF BEING

THE BEST KEPT SECRET.

WHAT WE’RE DOING

Building a cohesive **National Network brand** identity and value proposition.

WHY WE’RE DOING IT

There is a lot of noise about manufacturing, and **MEP gets lost in it.** A unified National Network brand is **critical for long-term survival.**

OUR COMMITMENT

We will collectively **build it together** and choose to go in a direction that **encompasses the diversity** of the national network.

Discovery & Research: Key Insights

- Strength of the MEP Network
- Benefits to Centers
- Disconnect with target audiences
- SMM mindset
- SMM perception of Centers

Brand Blueprint

Brand Reveal, National Summit 4.30.17

Building the brand from the inside out.

Afternoon Break

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NIST MEP Advisory Board Governance

Vickie Wessel, NIST MEP Advisory Board Chair
David Spence, Office of the General Counsel
Dave Cranmer, NIST MEP

NIST MEP Advisory Board Governance

- Ethics Briefing
- 2017 Charter Update
- Proposed MEP Advisory Board – Bylaws
  - Quorum
  - Attendance
  - Succession

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Wrap Up/Public Comments

Vickie Wessel, NIST MEP Advisory Board Chair

Carroll Thomas, NIST MEP Director

Thank You!

- Date of next board meeting:
  - *April 30, 2017, Pre-Summit!*