

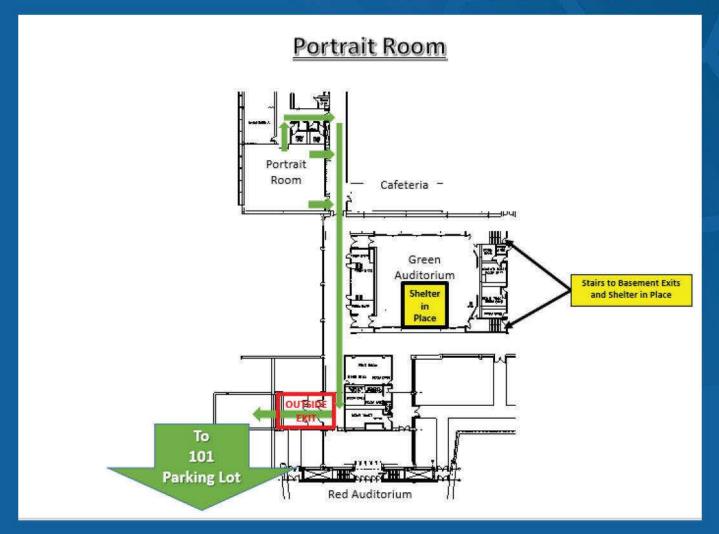
MEP Advisory Board March 2020 Board Meeting



MEP • MANUFACTURING EXTENSION PARTNERSHIP*



Welcome MAB and Guests to the NIST Campus in Gaithersburg, MD



Meeting Agenda Details

8:15 a.m8:35 a.m.	Board Meeting Opening/Logistics
8:20 a.m8:40 a.m.	 Welcome and Introductions Opening Remarks. Welcome from NIST MEP Leadership. Board and Audience Introductions.
8:40 a.m9:10 a.m.	MEP Director's Update
9:10 a.m9:35 a.m.	 MEP National Network 2017-2022 Strategic Plan Update Board Feedback and Discussion.
9:35 a.m10 a.m.	 Presentation: Overview NIST Engineering Laboratory Dr. Joannie Chin, NIST Engineering Laboratory. Board Feedback and Discussion.

Meeting Agenda Details Continued

10:15 a.m10:45 a.m.	 Presentation: MEP National Network Branding and Communications Chancy Lyford, NIST MEP Ben Vickery, NIST MEP Board Feedback and Discussion.
10:45 a.m11:35 a.m.	 Working Group Update Supply Chain Development Working Group Board Feedback and Discussion.
11:35 a.m12:05 p.m.	Working Group Update Executive Committee Working Group • Board Feedback and Discussion.
12:05 p.m12:30 p.m.	Wrap Up and Public Comments

Welcome and Introductions



Bernadine Hawes MEP Advisory Board Chair Carroll Thomas NIST MEP, Director & NIST, Acting, Associate Director for Innovation and Industry Services

Welcome New MEP Advisory Board Members



Donald Bockoven Fiber Industries LLC



Kevin Heller Ziegenfelder Company



Dr. Willie E. May Morgan State University

Introductions Around the Room

- 1. Name
- 2. Name of organization
- 3. How many years involved with MEP

MEP Director's Update

MEP Program Budget Outlook / Spend Plan

7

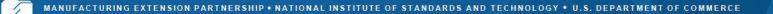
MEP National Network[™] Update

NIST MEP Updates

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3



MEP Program Budget Outlook/Spend Plan

MEP Program Budget Outlook

(as of 2/21/2020)

FY 2020 Appropriation Status

FY 2021 Appropriation Status



Proposed for elimination of federal funding in the President's budget.

Congress approved \$146 million.

President signed appropriation into law December 2019.



President's budget proposes to eliminate funding for the MEP Program.

NIST MEP FY 2020 Projected Spend Plan

Available Funding:	\$ Millions
Full Year Appropriation	146.0
Carryover from FY 2019	4.7
Funding from Other Agencies*	<u>3.4</u>
Total Available Funding	\$154.1
Planned Expenditures:	
Center Renewals	120.3
Strategic Competitions	10.6
Contracts	5.5
NIST MEP Labor	10.3
NIST and Program Overhead	<u>7.4</u>
Total Planned Expenditures	\$154.1

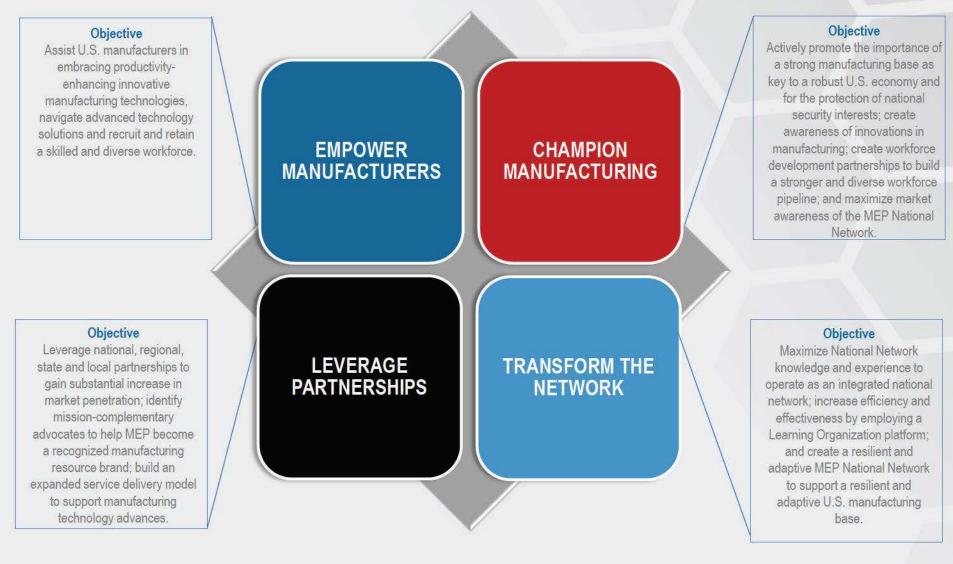
Estimated FY 2020 Efficiency Rate =10.64%; actual FY 2019 Efficiency Rate = 9.86%.



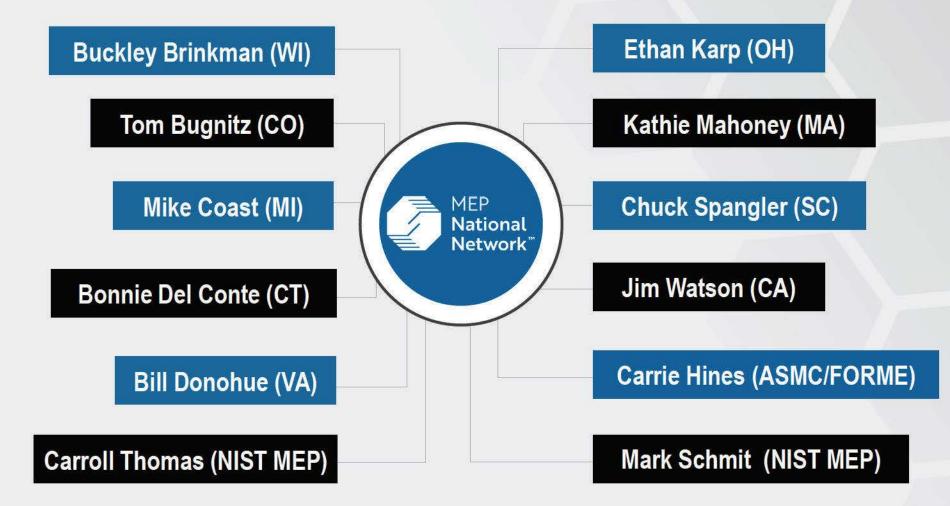


MEP National Network Updates

MEP National Network 2017-2022 Strategic Goals



MEP National Network Center Leadership Team (CLT)



MEP National Network Center Leadership Team (CLT)

- NIST MEP National Network Team Created
 - Staff of NIST MEP working to coordinate and communicate CLT activities internally.
- Strategic Group of the CLT met in January in California
 - Past: Review of output from the last three years.
 - Future: 2020 emphasis on operationalizing the MEP National Network (MEPNN).

Direction Forward

- Facilitation services through The Clearing
 - Interviews conducted with all 51 Center Directors to gather input on various topics, including their understanding and perspectives of the MEPNN.
- Alignment among all nodes in the MEPNN.
 - Discuss Go To Centers.
 - Emphasis on cybersecurity.
 - Operationalizing multi-Center client engagements.



CLT Committee on Advanced Manufacturing (AM) Technology Solutions helping to clarify tech focus areas, SMM needs, along with CAP project led by OMEP, involving multiple Centers.



Industry 4.0 Advanced Manufacturing for End-to-End Cyber-Physical Connectivity Activities

Across the Network



AM Technology Services NOFO from NIST closed Feb. 6; NIST anticipates making ~3 funding awards in April to accelerate MEP Center service delivery in Industry 4.0.

MEP National Network Industry 4.0 WG established with participation from several dozen MEP Centers to share best practices; facilitated by NIST MEP.



MEP Centers utilizing user / demonstration facilities and continuing to collaborate with Manufacturing USA Institutes.

NIST MEP Extension Services In Support of the MEP National Network

Food Industry Services

- Food safety continues to drive MEP Center services for small US food manufacturers.
- 5 active CAP projects developing Center approaches (GA, MO, MT, NJ, PR).
- National partnerships with US Food and Drug Administration and Food Safety Preventive Controls Alliance; also collaborating with Global Food Safety Initiative.
- MEPNN WG sharing best practices among MEP Centers.

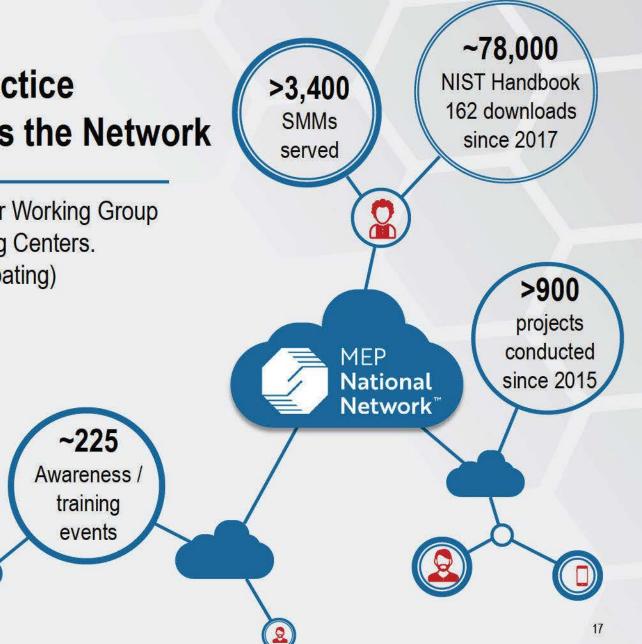
MEP-Assisted Technology and Technical Resource (MATTR)

- Connecting Small Manufacturers with NIST Labs.
- >40 MEP Center clients from ~20 Centers connected with NIST Lab expertise and technical resources to address client metrology and product / process development issues.
- MEPNN WG operating to continue developing MATTR as an MEP Center service.
- NIST MEP facilitating CRADAs between MEP Center clients and NIST Labs, and compensating NIST Labs, as warranted by MATTR opportunities. 16

Cybersecurity Practice Developing Across the Network

MEP National Network Cyber Working Group sharing best practices among Centers. (49 Centers currently participating)

Cyber for Defense Manufacturing Award from NIST MEP to MMTC (MI MEP Center) focused on awareness, assistance for >1,000 defense contractors, with participation from >30 MEP Centers.







NIST MEP Updates

NIST MEP Org Chart FY20

486

Finance Management & Center Operations Division Kevin McIntyre, Chief Adrienne Montague

Finance/Administration Tony Gomez (AO 486, 487) Autumn Hernandez (AO 481) Heather Mayton, XO

486.01

Center Operations Group Nadine DeJesus, Group Manager Mellissa Ayala Sekou Johnson Julia Shriner Hope Snowden Gloria Solomon

487

Regional & State Partnerships Division Mark Schmit, Chief Carol Shibley

Anthony Diaz Dimitrios Meritis Kim Pinckney

Beth Colbert Jose Colucci-Rios Tony Mastalski Gerson Santos-Leon Phill Wadsworth Tom Williams

488

Extension Services Division Dave Stieren, Chief Robert Barnes

Doug Devereaux Brian Lagas Andrew Peterson Michael Taylor Dileep Thatte Pat Toth Marlon Walker Samm Webb

489

Network Learning & Strategic Competitions Division Mary Ann Pacelli, Acting Chief

Wiza Lequin Mike Simpson (On Detail) Michael Wilson

Rob Ivester Deputy Director

48

Carroll Thomas

MEP Director

Staff Resource Management Monica Claussen

Monyelle Mingo Michele Montgomery

481

External Affairs & Performance Division Chancy Lyford, Chief

Team IT Security & Support Kathy Martin Justin Mocca Bryan Wade

481.01

Marketing & Communications Group Ben Vickery, Group Manager Nicole Ausherman Cheryl Gendron Katie Rapp Jennifer Rosa

481.02

Program Evaluation & Economic Research Group Ken Voytek, Group Manager Megean Blum Stephen Campbell Kim Coffman Missy Davis Diane Henderson Holly Jackson Megan Spangler Nico Thomas

New Deputy Director Welcome Dr. Robert W. Ivester



Dr. Robert W. Ivester

- Currently serves at DOE as the Director of the Federal Energy Management Program (FEMP) in the Office of Energy Efficiency and Renewable Energy.
- Served in Advanced Manufacturing Office (AMO) for six years.
- Spent more than 16 years at NIST, leading and performing research in advanced manufacturing.

Carroll Thomas

Acting, Associate Director for Innovation and Industry Services

Laboratory Baldrige Performance Excellence Hanagement Engineering Laboratory Program Office of Safety, Health and Congressional & Legislative Affa Information Technology Hollings Manufacturing Extension Environment Management and Organization Laboratory Partnership Office of Advanced Manufacturing Office of Information Systems Material Measurement Laboratory Office of Advanced Manufacturing Office of Facilities and Property NIST Center for Neutron Research Staff Offices Office of Financial Resource Staff Offices Technology Partnerships Office of Human Resources Standards Coordination Special Programs Office of Human Resources	NIST Director / Undersecretary of Commerce for Standards and Technology							
ServicesOffice of Acquisition and Agreements ManagementProgram Coordination International & Academic Affairs Congressional & Legislative Affa 		Industry & Innovation	of Management	Chief of Staff				
Communications Technology LaboratoryContractionOffice of Acquisition and Agreements ManagementProgramBaldrige Performance Excellence ProgramOffice of Safety, Health and EnvironmentCongressional & Legislative Affa ManagementInformation Technology LaboratoryHollings Manufacturing Extension PartnershipOffice of Information Systems ManagementManagementMaterial Measurement Laboratory NIST Center for Neutron Research Physical Measurement LaboratoryOfficesOfficesStaff OfficesTechnology PartnershipsOffice of Financial Resource ManagementOffice of Human Resources ManagementStaff OfficesOffice of Human Resources ManagementOffice of Human Resources ManagementOffice of Human Resources Management	Laboratory Programs		Management Resources	Public Affairs				
Special Programs	Laboratory Engineering Laboratory Information Technology Laboratory Material Measurement Laboratory NIST Center for Neutron Research Physical Measurement Laboratory Staff Offices	Baldrige Performance Excellence Program Hollings Manufacturing Extension Partnership Office of Advanced Manufacturing Staff Offices	Management Office of Safety, Health and Environment Office of Information Systems Management Office of Facilities and Property Management Office of Financial Resource Management Office of Human Resources	International & Academic Affairs Congressional & Legislative Affairs				
Research Protections Staff Offices								

Staff Offices

Civil Rights & Diversity Information Services **Business Operations Office Fabrication Technology**



1

NIST MEP on the M.O.V.E. (MEP On Virtual Engagement)

- NIST MEP staff in temporary office locations in 3 NIST bldgs. since Nov. 2018 departure from bldg. 301.
- Fall 2020 target timeframe for return to 301 offices.
- NIST MEP "Move Back In" committee
 - Developed office / workspace allocation policies and recommendations for staff assignments for NIST MEP management; forwarded to NIST OFPM in Feb. 2020.
 - Will address ongoing issues for NIST MEP as needed according to OFPM office space renovation project schedule.
 - Including networking, printers, copiers, furniture, etc.

Discussions & Questions



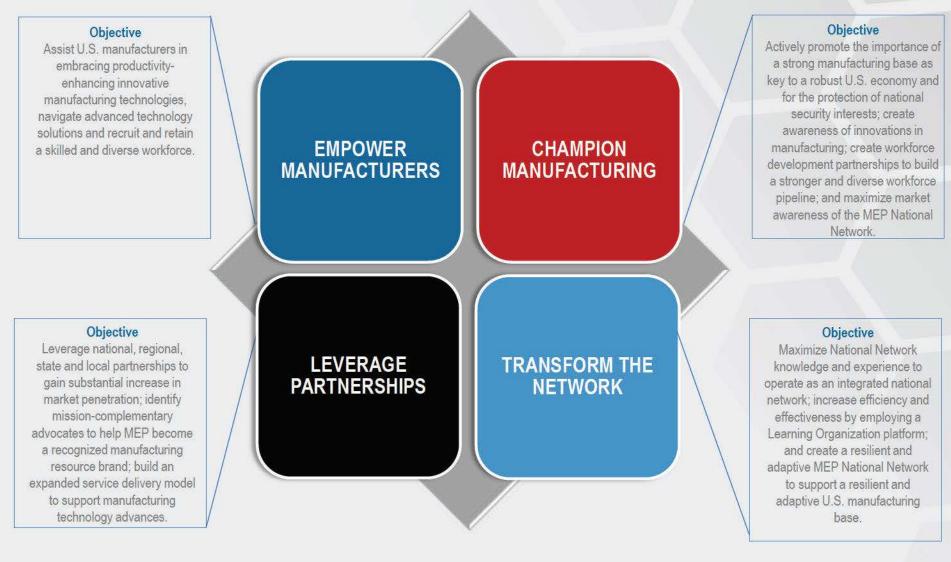
You may also email Cheryl Gendron at <u>Cheryl.Gendron@NIST.gov</u> or call 301-975-2785.





Strategic Plan Update

MEP National Network 2017-2022 Strategic Goals



1. Consensus Within Integrated National Network

Reach Network consensus on definition of Project and CME (client manufacturing establishment) interaction.

2. Center and Program Office Operational Excellence

Operationally improve reporting via measurement of on-time and accurate reporting.

3. Increase Projects and New Clients

Increase reported projects by 10% and reported new clients by 5%.

4. Increased Visibility

Amplify and measure Network brand awareness by at least 10%.

Latest 18-Month Goals

9/2019-3/2021

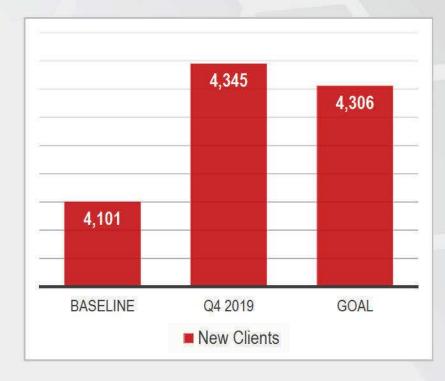


18 Month Measures of Success

Goal: Increase Projects by 10%

15,520 14,828 14,109 BASELINE Q4 2019 GOAL Projects

Goal: Increase New Clients by 5%



18 Month Measures of Success

Goal: Improve On Time Reporting Measurement.

- Four elements measured:
 - Progress plan.
 - Progress data.
 - Clients/projects.
 - Survey confirmation.

• Baseline (Q2 2019):

- 40 Centers reported on time with first 3 elements.
- 24 Centers reported on time across all four elements.

• Progress to Date (Q4 2019):

- 38 Centers reported on time with first 3 elements.
- 23 Centers reported on time across across all four elements.

Goal: Definitional Consensus.

- Define:
 - Client / project.
 - Client manufacturing establishment interaction.
- Working group of Center Directors being established.

18 Month Measures of Success

Goal: Amplify and Measure Network Brand Awareness by at Least 10%.

Brand Measure	Goal	Baseline	Progress To Date
Backlinks	114	104	TBD
Brand Mentions	138	125	TBD
Manufacturing Innovation Blog Subscribers	27,412	24,920	TBD
Social Media Followers	17,864	16,240	TBD
#MEPNationalNetwork Hashtag Occurrences	367	334	TBD

Established Baseline: Oct. 1, 2019 – Dec. 31, 2019.

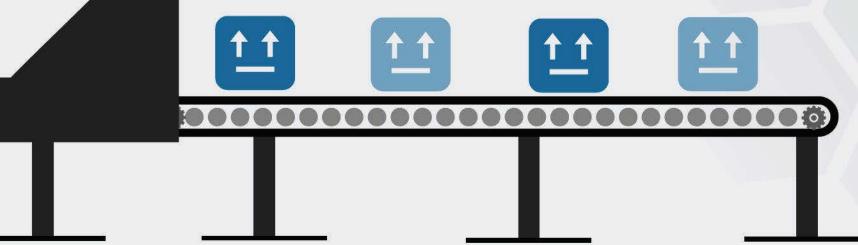
Discussions & Questions



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MEP Advisory Board Featured Presentations





NIST Engineering Laboratory Overview

Dr. Joannie Chin

NIST Deputy Director, Engineering Laboratory



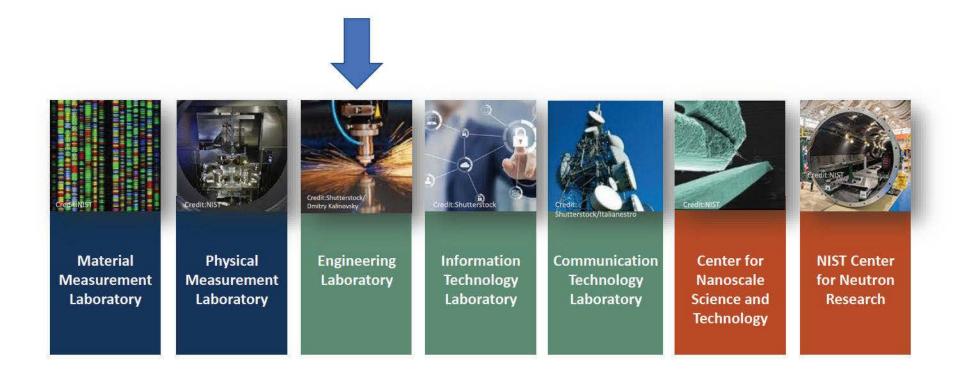
National Institute of Standards and Technology U.S. Department of Commerce

Overview of the NIST Engineering Laboratory

March 3, 2020

NIST Laboratory Programs









To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology **for engineered systems** in ways that enhance economic security and improve our quality of life



measurement science

Creating the experimental and theoretical tools – methods, metrics, instruments, and data – that enable innovation



standards

Disseminating physical standards and providing technical expertise to documentary standards that enable comparison, ensure interoperability, and support commerce



technology

Driving innovation through knowledge dissemination and public-private partnerships that bridge the gap between discovery and the marketplace









Objective: To reduce the risk and enhance the resilience of buildings, infrastructure, and communities to natural and manmade hazards through advances in measurement science

- Community Resilience
- Earthquake Risk Reduction
- Engineered Materials
- Fire Risk Reduction Buildings
- Fire Risk Reduction Communities
- Structural Performance Under Multi-hazards





Smart Manufacturing

Objective: To enable the next generation of innovative and competitive manufacturing through dynamic production systems and rapid design-toproduction transformation

- Additive Manufacturing
- Manufacturing Robots
- Model-based Enterprise
- Trustworthy Systems, Components, and Data for Smart Manufacturing





Objective: To enable scalable, dependable and reproducible performance measurement of reliable, resilient, safe, secure, and privacyenhancing cyber-physical systems.

- Cyberphysical Systems
- Smart Grid





Objective: To enable sustainable and energy efficient manufacturing, materials, and infrastructure through advances in measurement science

- Embedded Intelligence in Buildings
- Net-zero High Performance Buildings





Fire protection, fire physics, materials flammability



Intelligent sensing, control, robotics and automation



Structural analysis, disaster and failure studies





Sustainability, durability, and service life prediction of engineered materials

Building and renewable energy, indoor environment, and building systems performance measurement



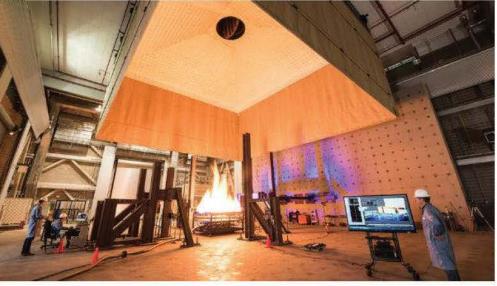
Systems integration, information modeling, model-based engineering





Net-zero Energy Research Facility

National Fire Research Laboratory







Metal Additive Manufacturing Research Center Additive Manufacturing Metrology Testbed

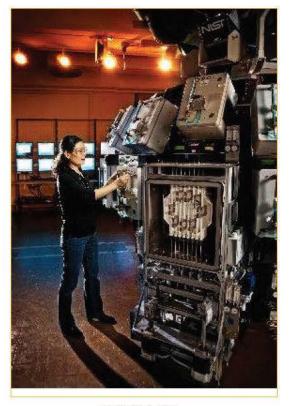




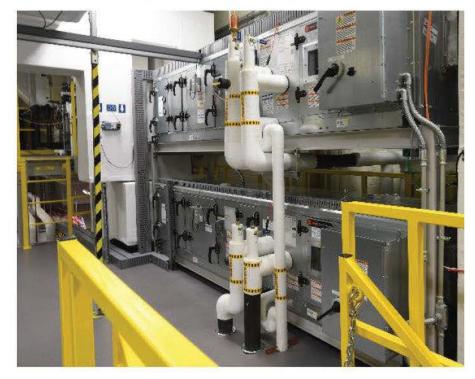


Manufacturing Robotics and Response Robotics Facilities





Intelligent Building Agents Lab



SPHERE

Manufacturing USA Network



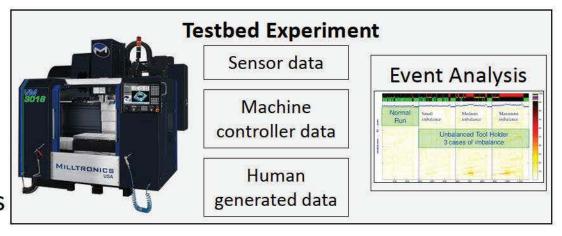


EL-MEP Collaborations



TechSolve (OH MEP)

To create publicly-available guidelines for merging multiple data sources that support maintenance activities

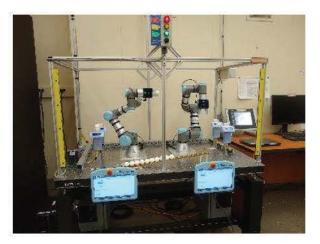




To explore the applicability and performance requirements for collaborative robots in small manufacturing enterprises, leading to the understanding of the state of collaborative robotics adoption

EL-MEP Collaborations





Two SMMs – To pilot cybersecurity program implementations of the Cybersecurity Framework (CSF) Manufacturing Profile. The results will be used to develop cybersecurity implementation guidance that can be used by ALL MEP member companies nationally.

FuzeHub (NY MEP) – To pilot a test method that identifies and isolates sources of robot workcell health degradation in multiple manufacturing facilities to produce deployment guidance



EL-MEP Interactions

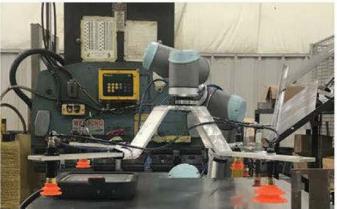


NIST MEP – co-led a workshop to understand the current state of adoption of collaborative robotics within the SMM community

Catalyst Connection (PA MEP) - facilitated visits to SMMs by NIST robotics program personnel

Participation of multiple state MEPs & SMMs – CMTC (CA MEP), Genedge (VA MEP), Ludowici (OH SMM), Mantec (PA MEP), Manufacturer's Edge (CO MEP), MSU CAVS-E (MS MEP), TechSolve (OH MEP), and





MSU CAVS-E (MS MEP), TechSolve (OH MEP), and Trividia Health (FL SMM) in standards meetings, technical conference panels, and NIST-led workshops

Discussions & Questions



You may also email Cheryl Gendron at <u>Cheryl.Gendron@NIST.gov</u> or call 301-975-2785.





MEP National Network Branding and Communications



Ben Vickery NIST MEP Manager, Marketing & Communications Group



Building the MEP National Network Brand



MEP • MANUFACTURING EXTENSION PARTNERSHIP[®]





Brand Initiative Background

- MEP Centers identified lack of awareness as one of their top challenges
- To **build a brand** for the MEP National Network to:
 - Increase national awareness and cohesiveness.
 - Build stronger more effective alliances.
 - Mission fulfillment to reach and serve more U.S. SMMs.



Internally Building and Strengthening the Brand



Implementing the Brand: Internal Tools

- Brand Implementation Kit.
- Co-brandable marketing materials / sell sheets.
- Social media and content curation kits.
- Where to find these materials.



Brand Implementation Kit

Created so Center staff can educate themselves about the Network brand and have access to co-branded assets for use in client-facing communications.

Two components:

- Center Educational Materials.
 - Client-Facing Materials.



Center Educational Materials

- PowerPoint Presentation.
- "When to Network" Flyer.
 - Network Directory.



PowerPoint Presentation

Explains the Network, its value, and how Centers can represent the national organization.

MEP National Network

[Center Name] is Part of the MEP National Network

Insert your MEP Center logo here.



Ideal size is 4" wide x 2" tall

The MEP National Network[™] is a unique public-private partnership that delivers comprehensive, proven solutions to U.S. manufacturers, fueling growth and advancing U.S. manufacturing.

Focused on helping small and medium-sized manufacturers generate business results and thrive in today's technology-driven economy, the MEP National Network comprises the National Institute of Standards and Technology's Manufacturing Extension Partnership (NIST MEP), the 51 MEP Centers located in all 50 states and Puerto Rico, and over 1,400 trusted advisors and experts at more than 375 MEP service locations, providing any U.S. manufacturer with access to resources they need to succeed.



"When to Network" Flyer

Discussions with clients will often focus on local concerns you are equipped to assist on your own. However, there are a number of scenarios where it is to your **advantage** to advise them that you are part of the **National Network**:

1. To let them know you have the backing of a larger organization.

2. To help coordinate projects across state lines (e.g., supply chain).

3. To provide them with access to expertise you may not have in house.



WHEN TO MENTION THE MEP NATIONAL NETWORK

A Guide for MEP Centers





Network Directory

A brochure with contact information for each Center in the MEP National Network.

This is updated as Center information changes.



The MEP National Network" is a unique public-private partnership that delivers comprehensive, provensolutions to U.S. manufacturers, fueling growth and advancing U.S. manufacturing.

Overview

Focused on helping small and medium-sized manufacturers generate business results and thrive in today's technology-driven economy, the MEP National Network comprises the National Institute of Standards and Technology's Manufacturing Extension Partnership (NIST MEP), the 51 MEP Centers located in all 50 states and Puerto Rico, and over 1,400 trusted advisors and experts at more than 375 MEP service locations, providing any U.S. manufacturer with access to resources they need to succeed.



Connect with the MEP National Network by Contacting the MEP Center in Your State

Alabama	Alaska	Arizona		
Alabama Technology Network www.atn.org	Alaska Manufacturing Extension Partnership	Arizona Commerce Authority www.revaz.org		
Center Director Keith Phillips	Center Director: Dr. Alyssa Rodrigues	Center Director: David Garafano		
Phone: 334-293-4673	Phone: 907-786-0412	Phone: 6(2-845-1200		
Email: kphillips@atn.org	Email: avshanks01@alaska.edu	Email: davidg@azcommerce.com		
Arkansas	California	Colorado		
Arkansas Economic Development Commission www.mfgsolutions.org	California Manufacturing TechnologyConsulting www.cmtc.com	Manufacturer's Edge www.marufacturersedge.com		
Center Director: Daniel Curtis	Center Director: James Watson	Center Director: Tom Bugnitz		
Phone: 501-685-4411	Phone: 510-263-3060 Phone: 303-592-4067			
Email: dcurtis@arkansasedc.com	Email: iwatson@cmtc.com	Email: info@manufacturersedge.com		



Client-Facing Materials

- PowerPoint Slides.
 - Marketing Sheet.
 - Email Content.

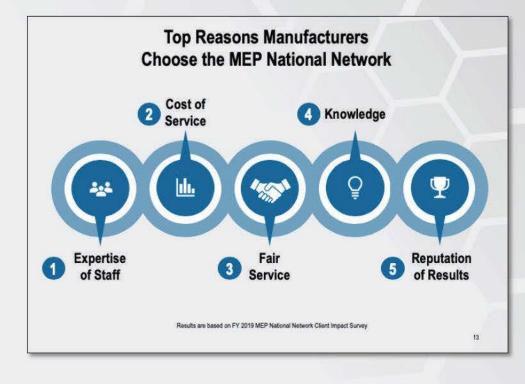


PowerPoint Slides

The MEP National Network developed 18 slides that outline statistics and Network benefits for your potential clients.

You can incorporate these slides (or just the content) into presentations you deliver to your clients.

The slides and their content are easy to copy and paste and alter to align with your Center's brand guidelines.



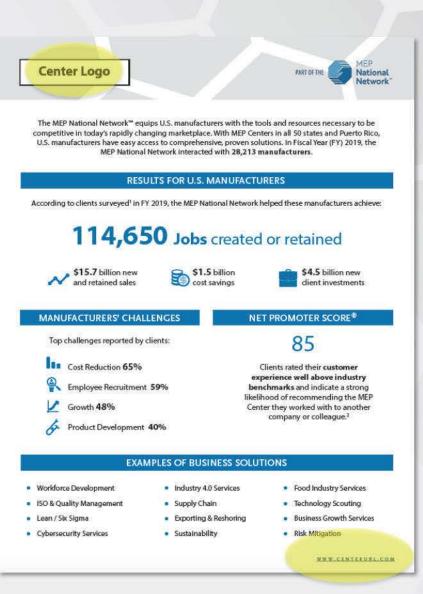


Marketing Sheet

A co-branded marketing sheet was designed so Centers can introduce their affiliation with the MEP National Network.

The sheet is an editable 2-page PDF document that identifies the Network and its value (along with the Center's) for potential clients.

Centers can add their logo, boilerplate, and contact information.



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Email Communications

An outbound email was drafted that introduces the MEP National Network and its value to potential clients.

Version this as you see fit. It was written as text-only so Centers can incorporate it into their own templates or email marketing program. MEP National Network Outbound Email Campaign for Centers

Subject: Get Access to Over 1,400 Manufacturing Experts

Find Proven Solutions to Your Toughest Challenges

Did you know that [MEP Center] is part of the MEP National Network™? The MEP National Network includes more than 1,400 manufacturing experts across the U.S. who work with small and medium-sized manufacturers to provide resources they need to generate business results and thrive in today's technology-driven economy.

For more than 30 years, MEP has worked with 111,343 U.S. manufacturers to foster \$132 billion in sales and \$22 billion in cost savings while helping to create or retain more than 1.2 million U.S. manufacturing jobs.

Through the Network, [MEP Center] can connect you with specialists who will provide affordable, proven solutions in the following areas, among others:

- Business Growth Services
- Cybersecurity Services
- Exporting & Reshoring
- Food Industry Services
- ISO & Quality Management
- Lean / Toyota Kata
- Risk Mitigation
- Industry 4.0
- Supply Chain / Supplier Scouting
- Sustainability
- Technology Driven Market Intelligence/ Technology Scouting
 - Workforce Development

Need help you can trust to tackle the challenges you <u>face?</u> Contact us today and connect with the MEP National Network.

Contact Us]



Co-brandable Marketing Materials or Sell Sheets for Specific Services or Programs



CYBERSECURITY

As of December 31, 2017, all manufacturers involved in the Department of Defense (DoD) supply chain that handle, proci or store Controlled Unclassified Information (CUI) must comply with the Defense Federal Acquisition Regulation Supplem (DFARS) clause 252,204-7012*Safeguarding Covered Defense Information and Cyber Incident Reporting.

These cybersecurity requirements will also soon apply to manufacturers that are part of supply chains for other federal institutions, including the General Services Administration (GSA), NASA, and the Department of Energy (DOE), per the National Archives and Records Administration (NARA).



PART OF THE

Nationa

Network



Lowering the risk of a product recall not only makes good business sense, but all manufacturers involved in the production of food, including both human and animal food, must now comply with the Food Safety Modernization Act (FSMA). The FSMA regulation focuses on a preventive approach to food safety. It deals with the requirements of current good manufacturing practices, hazard analysis, and risk-based preventive controls.

d Technical Information	-0-	Compliance is a competitive advantage in the		Food S	afety Compliance Services Can Help:	Cable and wire harnesses
cal Infrastructure Security on (DCRIT)	¥.	of low adoption among DoD suppliers	Attention Food Manufacturers	\$	Avoid costly fines.	Plastic extrusions Printed circuit board assemblies
Interfucture (information (CRIT)) Interfucture (information (CRIT)) Interfuctured and reduced annahoctured product	Æ	NARA will adopt similar requirements, creatin a general Federal Acquisition Regulation (FAR)	atir Every food manufacturer should		Prevent food safety recalls.	Welding Heat treating Plastic injection molding Stenilization
		a general recent Acquisition regulation (para) requirement for all federal contractors.			Avoid increased scrutiny from the FDA, including potential shutdowns.	
	8			6	Safeguard company brand and value.	
		*** *********	and the coup	۲	Build reputation as a manufacturer of high-quality food products.	

MEDACCRED[®] FOR MEDICAL DEVICE MANUFACTURING Medical device manufacturers can gain a strategic advantage through MedAccred, an accreditation developed by industryleading CEMs and administered by the Performance Review Institute (PRI), to address medical supply chain quality issues, reduce recalls, and improve patient safety.

Center Logo

daccred applies to proc

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MedAccred is an industry-managed supply chain accreditation program that reduces hisk to patient safety, assures quality products and supports compliance with requirements as they apply to critical processes used in the production of medical devices.

sses	The benefits of a MedAccred accreditation include:				
ctly t mot n,	Higher quality, lower overall costs, and reduced rework				
	Opportunities to reduce liability insurance costs				
	Recognition as a superior quality supplier				
	Potentially fewer redundant onsite audits by medical device OEMs				
	• by medicar device Opens				

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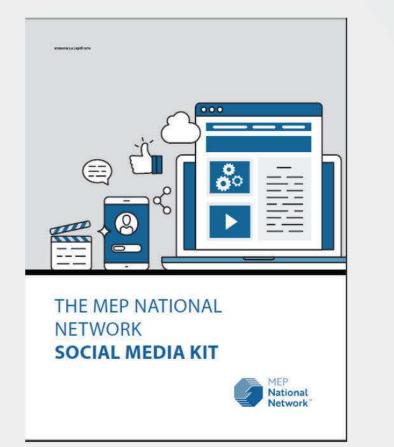
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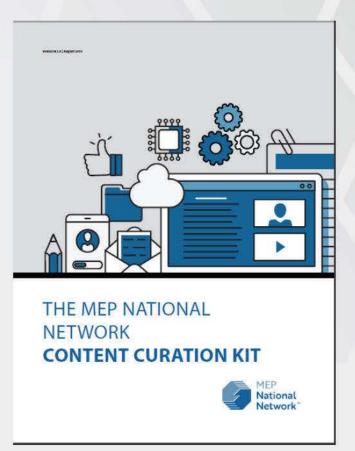
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Social Media and Content Curation Kits





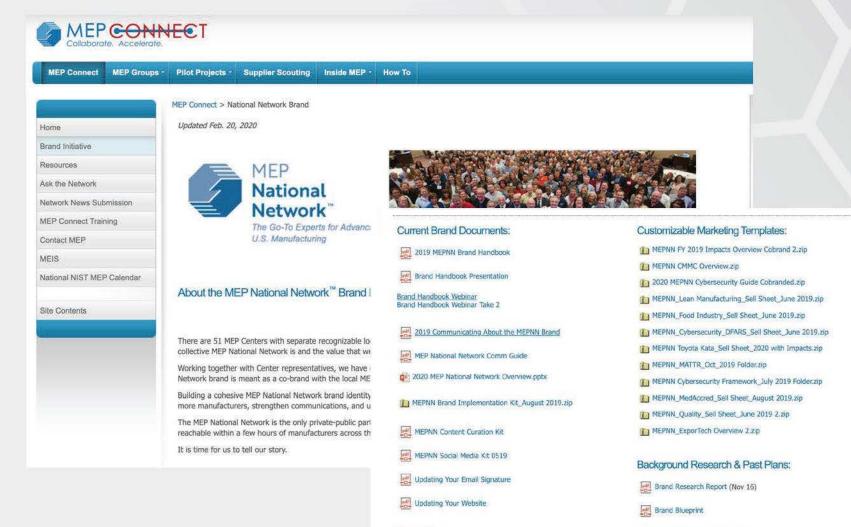


Where to Find these Materials

https://mic.nist.gov/Pages/National-Network-Brand.aspx



Brand Page on MEP Connect



Logo Files:

MEP National Network Brand Logos for Print MEP National Network Brand Logos for Web Branding Workshop Summary

Marketing Plan Overview Presentation Slides (Dec 2017)

Marketing Plan (Oct 2017)



Externally Building and Strengthening the Brand



Implementing the Brand: External Tools





MEP • MANUFACTURING EXTENSION PARTNERSHIP[®] + III INDUSTRIAL



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Industry Week

One of the most respected manufacturing publications, Industry Week publishes news and articles about best practices.

Industry Today

Industry Today's audience is decision makers at manufacturing and industrial companies.

Quality Digest

A quality-focused publication that publishes content by industry experts on international quality standards. It has an editorial track specifically devoted to Lean practices and often re-publishes NIST MEP blog content on its own initiative.



Sponsored Content Industry Week

JANELLE FARKAS

NOVEMBER 12, 2019



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4 Ways Robots Deliver ROI to Small and Medium-Sized Manufacturers

WI Manufacturing @WIManufacturing · Jan 21

Learn how #additivemanufacturing can support a strategic approach to pa design with this article from #MEPNationalNetwork expert Dave Pierson o @MAGNETOhio published in @IndustryWeek. bit.ly/2YxoBzY #MFGisNO'



Part-Design Possibilities Enabled by Additive Manufac... Over the last five years, two main advances have helped additive manufacturing (AM) evolve from a prototyping... S industryweek.com

1

Leveraging Your Data As a Foundation for Manufacturing ROI





A coording to the International Institute for Analytics, businesses that use data will gain \$430 billion in productivity benefits over competitors who aren't using data by 2020. As an industrial engineer for the Northeastern Pennsylvania Industrial Resource Center, part of the MEP National Network, 1 tell small-business owners and manufacturers that this quote does not say you

11

03

73

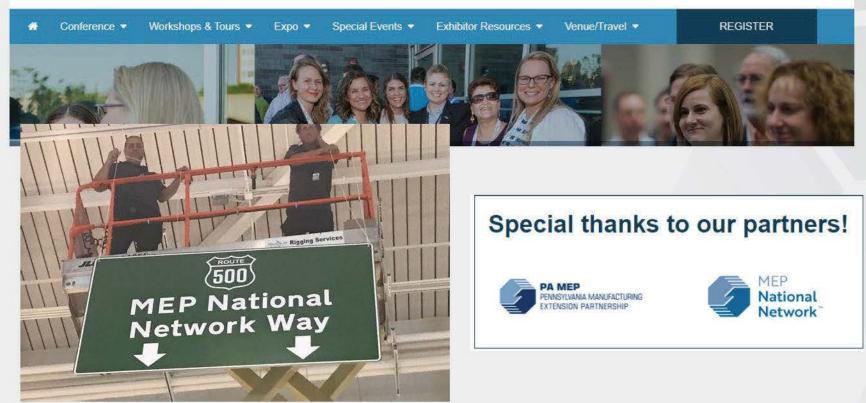


Tradeshow Presence

IndustryWeek Become a Sponsor Advisory Board Press Contact Us LOGIN



April 1-3, 2019 David L. Lawrence Convention Center Pittsburgh, PA USA Presenter of the IndustryWeek Best Plants Award





Social Media

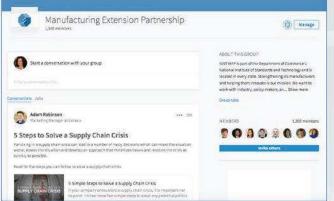


Twitter 6,962 followers

LinkedIn Group: 1,422 members and a Showcase Page

-

MEP National Network[™]. The Go-To Experts for Advancing U.S. Manufacturing



Sign Up /

Facebook 9,520 followers



Post Reach and Engagement

Posts with the Most Engagement & Highest Reach Utilizing the #MEPNationalNetwork Hashtag (Number of impressions, people reached, reactions, shares and comments)

FY20 Q1

5,483 Impressions; Total Engagement: 47 12 likes, 9 retweets, 7 profile clicks, 1 reply



Join the "Cybersecuring The Supply Chain – Make Cybersecurity A Competitive Advantage webinar"...

1,400 People Reached; Total reactions, comments, shares: 92; Total engagements: 238; 64 likes; 13 comments; 15 shares

> Cincinnati Crane & Hoist was the victim of a cyberattack in 2017 through a spearfishing campaign...

545 Impressions; 9 reactions; 1 comment; 8 shares

Cincinnati Crane & Hoist was the victim of a cyberattack in 2017 through a spearfishing campaign...





Social Media Campaign: Meet the Network

MEET THE MEP NATIONAL NETWORK™



Introducing Diana Martinez, Ph.D.

Business Advisor and Lean Six Sigma Master Black Belt 13 Years in Manufacturing Industry







Earned Media

Quality Digest Live -- April 19, 2019





From Prototype to Product, with Plenty of Guidance

Nuclear Sensors Startup Gets an MEP Boost.

Kathie Mahoney AUG 14, 2019

Forbes Bill

Billionaires Innovation Leadership Money Business Small Business Lifestyle Lists

The MEP National Network: A Public-Private Partnership That's All About Boosting U.S. Manufacturing



Jim Vinoski Contributor Manufacturing I write about all facets of manufacturing.



American manufacturing has been on a steady growth streak for years now, but that wasn't always the case. Back in the middle to late 1980s, U.S. industry was mired in a long, severe slump, and had been shedding plants and workers since the 1970s.



Discussions & Questions



You may also email Cheryl Gendron at Cheryl.Gendron@NIST.gov or call 301-975-2785.

MEP Advisory Board Working Group Updates



Supply Chain Development Working Group

Committee Members

- Board Leadership
 - Matthew Newman
- Board Members
 - LaDon Byars, Bernadine Hawes, Mary Isbister, Chris Weiser
- NIST MEP Support
 - Dave Stieren, Mark Schmit

• Deliverable

 Guidance and perspectives on the MEP National Network support and development of manufacturing supply chains with an emphasis on defense suppliers regarding Defense Industrial Base gaps; and expertise on who should be brought into the discussion to provide insight on defense supplier gaps.

Discussion Topics for the Board

MEP National Network supports DoD Supply Chains in many areas, highlighted by:

- Cybersecurity awareness and assistance.
- Working with DoD in technology transfer / transition involving defense manufacturing suppliers.

NIST MEP seeks ongoing Advisory Board perspectives on these MEP National Network focus areas, approaches, challenges

MEP National Network Cybersecurity February 2020

MEP National Network cybersecurity assistance for small manufacturers continues to develop nationwide capabilities

- Continues to be spurred by strong partnerships with DoD.
- Continued MEP role with Defense Federal Acquisition Regulation Supplement (DFARS) requirements for defense sector.
- Emerging MEP Center role with new DoD Cybersecurity Maturity Model Certification (CMMC) Program.

78% in supply chain attacks last year

"Supply chain attacks are the type of cyber attack that looks for an opening into a network through the supply network, which is notorious for its lack of security. Malware statistics show that these are on the rise in all industries, so making sure your suppliers keep their online databases safe is a must."

Source: Symantec

Every 39 Seconds

A Clark School study at the University of Maryland is one of the first to quantify the near-constant rate of hacker attacks of computers with Internet access — every 39 seconds on average, affecting one in three Americans every year — and the non-secure usernames and passwords we use that give attackers more chance of success.

Cyber Risk Assessments Need Improvement

Almost one-third of manufacturers have not performed cyber risk assessments specifically focused on the industrial control systems operating on their shop floors, resulting in a potentially significant risk to their operations.

Source: Cyber risk in advanced manufacturing, Deloitte and MAPI

MEP National Network Cybersecurity Progress Summary – February 2020



The MEP National Network has made significant progress ... and continues to move forward addressing important needs.

MEP National Network Progress: Cybersecurity Assistance Practice February 2020

>3,400 Small Manufacturers served by MEP Centers Nationwide.

~225 Awareness & Training Events conducted by MEP Centers Nationwide.



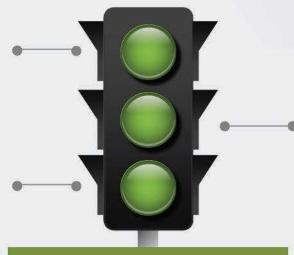
958 cybersecurity projects conducted for U.S. manufacturers by MEP National Network since 2015.

Expanding capabilities across the Network

NISTIR 7621 "Small Business Information Security: The Fundamentals," has also been **downloaded over 163,000 times** since publication by Pat Toth, NIST MEP, in Nov 2016.

MEP National Network Progress: Cybersecurity Assistance Practice February 2020

- 12 MEP Centers have received ~\$15M OEA funding, focused on working with state-based organizations.
- Focus on cyber workforce training and education.
- NIST Handbook 162 downloaded ~78,000 times since Nov 2017 NIST MEP publication.
- Pat Toth, NIST MEP, author.



Expanding capabilities across the Network

- MEP NN Cybersecurity Working Group (WG) meets every 6 weeks.
- WG face-to-face mtg in Orlando, May 2020.

Highlights: MEP Cybersecurity and the DoD

NIST MEP – OUSDR&E Interagency Agreement (IAA) funding MEP Centers to serve cyber needs of small defense mfg suppliers between Aug. 1, 2019 – Dec. 31, 2020.

- National Network award, led by MI MEP, to provide nationwide cybersecurity awareness, hands-on technical assistance, and pilot operational technology (OT) protections.
 - Collaborating with NIST Labs.
 - Collaborating with MxD Manufacturing USA Institute in Chicago.
- MEP Center participation from >30 states, in addition to MI:
 - AL, CA, CO, CT, DE, FL, GA, ID, IL, IN, KS, KY, LA. MA, MD, MO, MS, NC, NJ, NY, OH, OK, OR, PA, RI, SC, TN, TX, WA, WI, WV.

Highlights: MEP Cybersecurity and the DoD

National awareness for defense contractors

Event schedule

Area	Region	Date
Michigan, Indiana, Ohio	MW	11/22/2019
Long Island, New York	NE	12/5/2019
Mass, CT, RI	NE	12/17/2019
Florida, Georgia	SE	1/30/2020
Texas, Oklahoma	SW	2/11/2020
Selfridge Base (Special Event)	MW	2/26/2020
Texas, Louisiana	SE	3/10/2020
Ohio, Indiana, Kentucky	MW	3/10/2020
Webinar	Nat'l	3/16/2020
Michigan, Indiana, Ohio	MW	3/17/2020
DC, Maryland	East	3/24/2020
Alabama, Mississippi, Georgia	SE	3/26/2020
Southern California	West	3/31/2020
Florida, Georgia. Alabama, Mississippi	SE	4/2/2020
Nashville	SE	4/9/2020
Pennsylvania, Ohio, WVA	MW	4/16/2020
Virginia, North Carolina	SE	4/21/2020
Washington, Oregon, Idaho	NW	4/22-23/20
Pennsylvania, New Jersey, Delware	NE	4/30/2020
Webinar	Naťl	5/15/2020
North Carolina, South Carolina	SE	5/20/2020
Cleveland	MW	6/9/2020
Kansas, Missouri	MW	6/17/2020
Webinar	Nat'l	7/15/2020
Illinois, Missouri	MW	7/15/2020
Washington, Oregon	NW	8/5/2020
Denver	Mountain	8/20/2020
Southern California	West	9/10/2020
Webinar	Nat'l	9/15/2020
Chicago, Wisconsin	MW	9/15/2020
Mississippi (Special event)	SE	4/00/20

Highlights: MEP Cybersecurity and the DoD

- Hands-on MEP Center technical assistance to defense contractors.
 - Defense contractors to receive comprehensive, hands-on technical assistance from MEP Centers to prepare for DFARS compliance; assistance underway.
 - Companies located in CA, CO, CT, FL, IL, MD, NC, OR, PA, TX, VT.
 - DoD supply chains represented by these companies include: aerospace, air defense, satellite tracking, electronics, energy systems and batteries, energetics, solider systems, fire protection, nuclear propulsion, et.al.
 - Manufacturing processes conducted by these companies include machining, additive manufacturing, electronics processing, composites manufacturing, optics manufacturing, packaging, industrial automation, et.al.

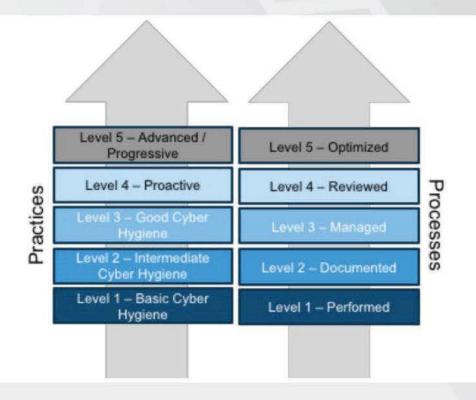
Highlights: MEP Cybersecurity for Defense Manufacturing and the NIST Laboratories

- MEP Centers, NIST MEP working with NIST Labs to develop new NIST Cybersecurity Framework Manufacturing Profile Implementation Guidance.
 - MEP Center clients from MI and IN have been assessed against NIST CSF Manufacturing Profile to generate use cases for NIST Labs to produce next iteration of Manufacturing Profile Implementation Guidance.
 - NIST Lab activities funded by NIST MEP under NIST MEP OUSDR&E IAA.
 - Implementation Guidance from NIST Labs will:
 - Address operational technology (OT) vulnerabilities specific to manufacturing operations that are not covered by DFARS cybersecurity requirements.
 - Be pilot implemented at the 2 participating manufacturers.

New DoD Cybersecurity Maturity Model Certification (CMMC) Program

NIST MEP providing ongoing guidance to MEP Centers' approach.

- Future DoD acquisitions will include required certification levels for contractors.
- CMMC does not yet directly impact MEP Centers' engagements with small defense contractors.
- CMMC does not negate DFARS requirements.



New DoD Cybersecurity Maturity Model Certification (CMMC) Program

- MEP working closely with DoD to understand program plans and position MEP Center role for assistance to defense contractors.
- CMMC model released January 2020.
- 15 member CMMC Advisory Board formed.
- Certification of Assessment Orgs Summer 2020.
- New DFARS rule on CMMC June 2020.
- RFI for 10 "pathfinder" contracts June 2020.
- RFPs for 10 "pathfinder" contracts September 2020.
- Full implementation by 2026.

Technology Transfer and Transition Support for DoD

MEP National Network supporting:

- Small manufacturer participation in new regional innovation initiatives called Tech Bridges that are being established by the Navy around the U.S.
- Technology insertion for Navy shipbuilding.







MEP and NavalX Tech Bridges

- NavalX established in Feb. 2019.
 - Creation of Tech Bridges to connect and sustain acceleration ecosystems for Navy needs in off-base Navy locations around U.S.
 - Tech Bridges partnering with start-ups, academia, corporations, small businesses, non-profits, private capital, government entities.
 - Tech Bridges building sustainable networks for collaboration and accelerating problem solving; supporting collision spaces; and generating dual-use solutions.
- MEP Centers operating in Tech Bridge states are working with Tech Bridges to engage small U.S. manufacturers.
 - Tech Bridges currently in RI, SC, FL, IN, CA, and WA.
 - Other Tech Bridges being considered, including DC/VA/MD, VA, HI, others.
 - Polaris MEP (RI) out in front thanks, Christian Cowan.
 - NIST MEP negotiating national partnership with Office of Naval Research for execution in 2020 to engage and fund MEP Center efforts in Tech Bridge activities.

MEP and Navy Shipbuilding

- NIST MEP Naval Sea Systems Command Interagency Agreement (IAA).
 - Provides funding to NIST MEP for MEP Centers to identify and insert leading-edge manufacturing technology into Navy shipbuilding applications.
 - Currently focused on steel fabrication and assembly operations used in production of Ford Class aircraft carriers at Newport News Shipbuilding in Newport News, VA.
 - Current MEP Center tasking led by GENEDGE Alliance (MEP Center in VA).
 - IAA structured for National expansion to other shipbuilding applications in other states and involving other MEP Centers.
 - National cohort of MEP Centers established in states where Navy shipbuilding occurs (public and private yards) to prepare for expansion of efforts.

Executive Committee Working Group

- Committee Members
 - Board Leadership
 - Bernadine Hawes, Chair of MEP Advisory Board
 - Matt Newman, Vice-Chair of MEP Advisory Board
 - Board Members
 - Mitch Magee
 - George Spottswood
 - Pat Moulton
 - NIST MEP Support
 - Carroll Thomas, Cheryl Gendron, Phill Wadsworth, Wiza Lequin
- Deliverable
 - Provide guidance on future MEP Advisory Board leadership and membership recruitment, provide insights into cultivating strong Board governance as well as explore ways to expand the MEP Advisory Board's role in regard to the local MEP Center Boards.

Center Board Outreach Program

- Enhance strength of relationships between national and local boards.
- Communicate and Educate local leaders about the MEP National Network.
- Learn about your assigned Centers.

Strategic Plan Mapped To National Network

EMPOWER MANUFACTURERS

Primary 51 Centers/CLT

Collaborative Support Extension Services

Important Support NIST MEP Leadership R&S Partnerships Network Learning & Comp M&C PEER FM/Center Ops Admin IT/Security

CHAMPION MANUFACTURING Primary

51 Centers/CLT NIST MEP Extension Services M&C R&S Partnerships NIST MEP Leadership ASMC/FORME Advisory Board Center Boards

Collaborative Support Network Learning and Comp PEER Important Support FM/Center Ops Admin IT/Security Staff Resource Mgmt

LEVERAGE PARTNERSHIPS

Primary 51 Centers/CLT

51 Centers/CLI NIST MEP

Extension Services M&C NIST MEP Leadership R&S Partnerships

Center Boards

Collaborative Support Advisory Board ASMC/FORME PEER

Important Support Admin FM/Center Ops IT/Security Staff Resource Mgmt

TRANSFORM THE NETWORK

Primary 51 Centers/CLT NIST MEP (All)

Collaborative Support Advisory Board Center Boards ASMC/FORME

Center Board Outreach into Action

Questions for Board Leaders

- What are the most important key initiatives being undertaken at the national level and how are these similar to or different from those happening locally?
- What is the local vision, if any, for manufacturing and how does this integrate with the national vision?
- What are the best practices that are garnering attention and how might they apply locally?
- What are some of the most effective forms of advocacy?
- How can the MAB and the local center become more aligned and informed regarding their respective agendas?

Discussion on Current Progress with Outreach

- Discuss the availability of technology and the openness of the local boards to having outside people attend their meetings.
- Explore challenges and successes.
- Discuss how can staff support your efforts.
- Layout next steps for the program.

New Working Group Discussion: The Next Strategic Plan

Why have a Strategic Plan?

Purpose - to provide long-term, program direction for the MEP National Network and to unite and align stakeholders, partners, management and staff with this direction.

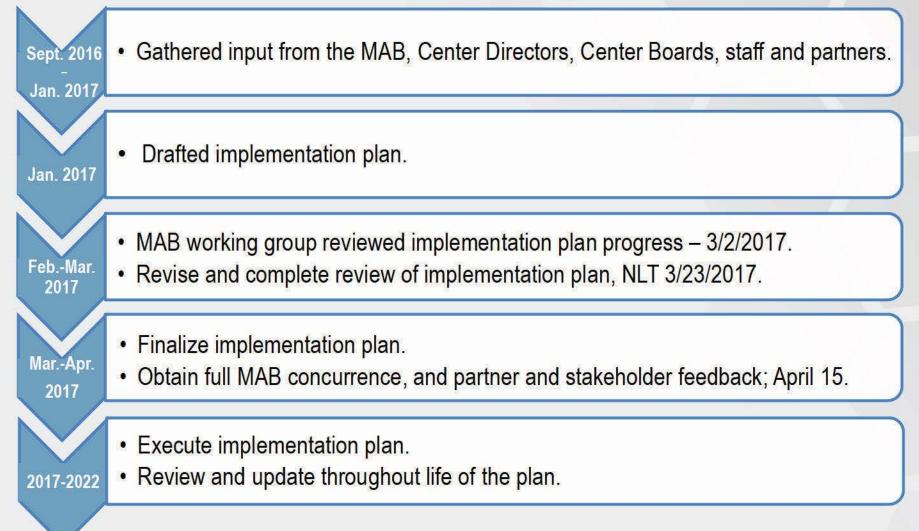
*Provide guidance on what to do as well as what **NOT** to do.

The Development of the 2017-2022 Plan

MEP Advisory Board Strategic Planning Working Group

- Started to work on update one year prior (March 2016).
- Board working group members.
 - Vickie Wessel, former Board Chair
 - Bernadine Hawes, MEP Board member
 - Eileen Guarino, former MEP Board member
 - Dave Cranmer, former NIST MEP Deputy Director
 - Mike Simpson & Wiza Lequin, NIST MEP staff
- Conducted feedback sessions with several groups of stakeholders. (CD, Ctr Boards, practitioners, NIST MEP staff and RFI)

Implementation Plan Timeline



Other Discussion Topics for the Board

- 2019 MEP Advisory Board Report
 - Special thanks to the NIST MEP M&C team especially to Katie Rapp.
 - Timeline/sharing the report.
- Supporting/mentoring new members
 - Three new members onboard.
- MEP Advisory Board leadership into 2020





MEP ADVISORY BOARD 2019 ANNUAL REPORT

Bernadine





Future Meeting Schedule

2020

Wednesday, June 3, 2020*

Tulsa, OK Tour and Board Dinner: Tuesday, June 2, 2020 Additional details to follow.

Tuesday, Sept. 22, 2020*

Phoenix, AZ In conjunction with the MEP National Network Update Meeting and FORME Best Practice Conference Associated Events throughout the week. Monday, Sept. 21-24, 2020.

*Timing Subject to Change.

Discussions & Questions



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Thank You

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