



**MEP • MANUFACTURING
EXTENSION PARTNERSHIP®**

MEP Advisory Board

September 15, 2019 Board Meeting

NIST

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

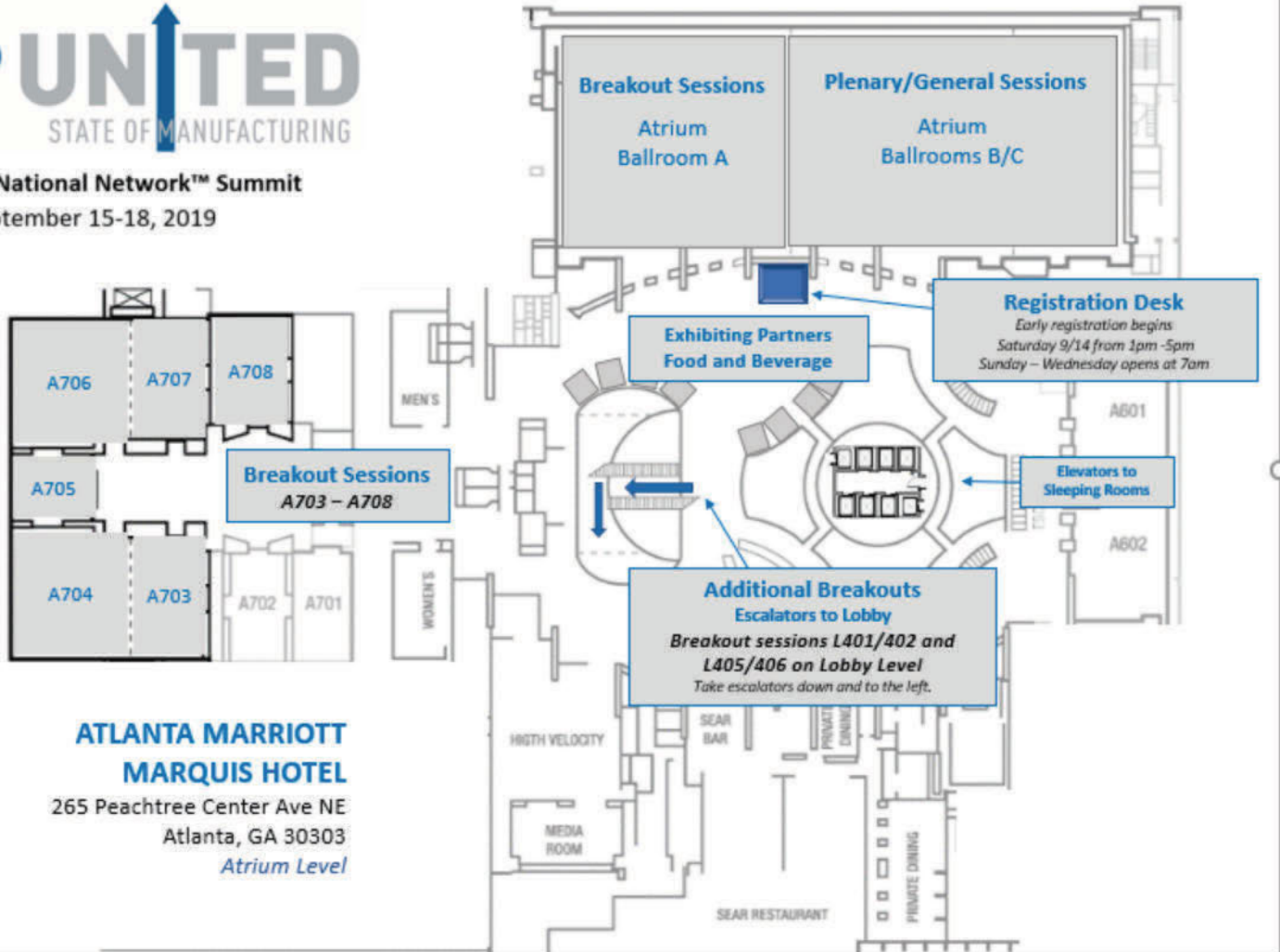




Welcome to Atlanta And the MEP National Network™ Summit!



2019 MEP National Network™ Summit
September 15-18, 2019



**ATLANTA MARRIOTT
MARQUIS HOTEL**
265 Peachtree Center Ave NE
Atlanta, GA 30303
Atrium Level



Meeting Agenda Details

8:30-8:35 a.m. Board Meeting Opening/Logistics

8:35-9:15 a.m. Welcome and Introductions

- Opening Remarks
- Welcome from NIST Leadership
- Board and Audience Introductions

9:15-9:35 a.m. MEP Director's Update

9:35-9:55 a.m. Presentation: NIST MEP Policy Academy Overview
Mark Schmit, NIST MEP

- Board Feedback and Discussion

10:10-10:30 a.m. Presentation: NIST Cyber CAP Award Update
David Stieren, NIST MEP

- Board Feedback and Discussion



Meeting Agenda Details Continued...

10:30-11:00 a.m.

MEP National Network 2017-2022 Strategic Plan Update

- Board Feedback and Discussion

11:00 a.m.-12:30 p.m.

Presentation and Group Activity: Board Engagement with the MEP National Network

- Roundtables – Feedback and Discussion

1:35-2:25 p.m.

Working Group Update

Supply Chain Development Working Group

- Board Feedback and Discussion

2:25-3:05 p.m.

Working Group Update

Executive Committee Working Group

- Board Feedback and Discussion

3:05-3:30 p.m.

Wrap up and Public Comments



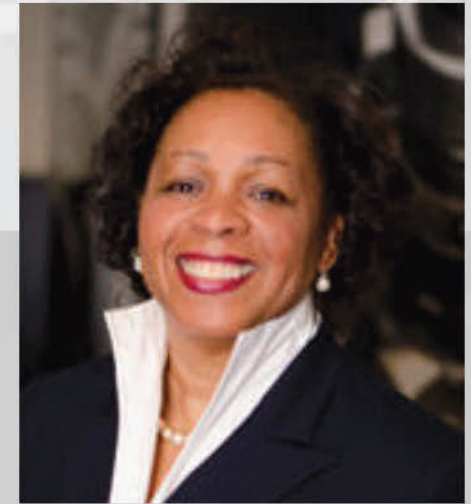
Welcome and Introductions



Bernadine Hawes
MEP Advisory Board Chair



Dr. Walt Copan
NIST
Director



Carroll Thomas
NIST MEP
Director

Guests

- Name
- Name of organization
- How many years involved with MEP



MEP Director's Update

- 1** MEP Program Budget Outlook/Spend Plan
- 2** Special Reports
- 3** MEP National Network Updates
- 4** NIST MEP Updates



MEP Program Budget Outlook/Spend Plan





MEP Program Budget Outlook

(as of 8/21/2019)

FY 2019

Appropriation Status



Appropriation signed into law
Feb. 15, 2019

FY 2020

Appropriation Status



Proposed for elimination of federal
funding in the President's Budget

House Mark at **\$154 million**

Senate Mark TBD



NIST MEP FY 2019 Projected Spend Plan

<u>Available Funding:</u>	\$ Millions
Full Year Appropriation	140.0
Carryover from FY 2018	6.5
Funding from Other Agencies*	<u>2.8</u>
Total Available Funding	\$149.3

<u>Planned Expenditures:</u>	
Center Renewals	117.0
Strategic Competitions	10.0
Contracts	4.8
Carryover to FY2020	1.0
NIST MEP Labor	8.7
NIST and Program Overhead	<u>7.8</u>
Total Planned Expenditures	\$149.3

Estimated FY 2019 Efficiency Rate=10.9%; actual FY 2018 Efficiency Rate=9.1%.

* Funding from DoD for Strategic Competitions, Contracts and Project Support



Special Reports





Requirements of the American Innovation and Competitiveness Act (AICA)

Pursuant to the AICA (P.L. 114-329)

From AICA due two years after enactment Jan. 6, 2017 in consultation with this Board, the GAO conducted a report on the cost share impact due to the legislative change and it was made public on Mar. 7, 2019.

It can be found at:

<https://www.gao.gov/products/GAO-19-219>

Report completed and submitted to Congress

Pursuant to the AICA (P.L. 114-329)

The NIST Director shall submit to Congress a report on the first and second years of operations for Centers from the recompetition.

The report provides details on the engagement in services provided by Centers, the characteristics of services provided and the volume and type of services.

Report completed and submitted to Congress

Pursuant to the AICA (P.L. 114-329)

A final report on cost share is required after three years of the date of the above GAO study Mar. 7, 2022, the NIST Director is required to contract with an *independent organization* to revisit the initial GAO report, **and again may consult with this Board**. NIST MEP is in the process of identifying a third party contractor.

Report forthcoming



MEP National Network Updates



MEP National Network Center Leadership Team (CLT)

Buckley Brinkman (WI)

Tom Bugnitz (CO)

Mike Coast (MI)

Bonnie Del Conte (CT)

Bill Donohue (VA)

Carroll Thomas (NIST MEP)



Jennifer Hagan-Dier (CLT/CO)

Carrie Hines (ASMC/FORME)

Ethan Karp (OH)

Jim Shillenn (PA)

Chuck Spangler (SC)

Jim Watson (CA)

Chancy Lyford (NIST MEP)



MEP National Network Center Leadership Team

Major Themes: Go-to Collaborative Center, Operating Principals

Working Committees:



Outreach Initiative (Tom Bugnitz)

- Regional Meetings, Summit
- One-Pager



Multi-state Engagement (Bill Donohue)

- MOU
- Multi-state engagement project and process



Learning (Buckley Brinkman)

- Leveraged Learning Framework: Moved from Knowledge Sharing to Learning
- Mapping Knowledge Sharing/Learning Platforms



MEP National Network Center Leadership Team

Working Committees Continued:



- **Network Evolution (Bonnie Del Conte)**

- Understanding the sequence of healthy evolving of the National Network



- **Manufacturing Technology Solutions (Mike Coast)**

- Determining how to handle manufacturing technology requests to partner, share and leverage other Centers



- **Communications (Jim Shillenn)**

- Determined communication process
- Documented communication channels
- Highlighting Center project collaboration via *Network News*
- Integration of Brand Council



Industry 4.0

Activity and
Practices
Across the Network



CLT Committee on advanced manufacturing (AM) technology solutions addressing MEP Center practices and SMMs needs.



MEP Centers partnering with Manufacturing USA institutes. AM NOFO forthcoming from NIST as follow-on to embedding projects; ESD seeking to hire Industry 4.0 expert.



Cybersecurity practice maturing across Network



MEP Centers utilizing user / demonstration facilities.



Smart Manufacturing connections occurring between MEP Centers and NIST.



MEP Centers featured at Industry 4.0 - related conferences and events.



NIST MEP Extension Services Division

- **Connecting MEP Center Clients with NIST Labs – MATTR**
 - Expanded to provide NIST MEP compensation to NIST Labs to deepen NIST Lab assistance to small manufacturer clients of MEP Centers.
 - MEPNN working group formed to broaden MEP Centers' leverage of NIST Labs – expansion of current MATTR Steering Team.
 - NIST Council of Lab Liaisons forming to provide a MATTR POC at each NIST Lab.
- **Food Industry Services**
 - MEPNN Steering Team leading national capabilities development – evolving into MEPNN Working Group.
 - National Memoranda of Understanding (MOU) signed and executed with Food and Drug Administration (FDA) Aug. 1, 2019.
 - New special project award made from NIST MEP to NJMEP to further develop MEPNN service capabilities across the U.S.



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Updates



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

55 NIST MEP staff shared temporary space, required heavy telework

NIST MEP staff could be back into Building 301





480 Carroll Thomas
MEP Director

Vacant - Deputy Director
(Unofficial) Acting Associate Director,
Chancy Lyford

Staff Resource Management
Monica Claussen
Michele Montgomery
Monyelle Mingo

481
External Affairs, Performance &
Support Division
Chancy Lyford, Chief
Vacant (Temp AA)

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

488
Extension Services Division
Dave Stieren, Chief
Robert Barnes

Samm Bowman
Doug Devereaux
Brian Lagas
Dileep Thatte
Pat Toth
Marlon Walker
Vacant (Industrial Engineer)
Vacant (General Engineer)

August 2019

487
Regional and State Partnerships
Division
Mark Schmit, Chief
Carol Shibley

Beth Colbert
Jose Colucci-Rios
Phillip Wadsworth
Tom Williams
Tony Mastalski
Gerson Santos-Leon
Vacant (Partnership Specialist)
Vacant (Partnership Specialist)
Vacant (Partnership Coordinator)

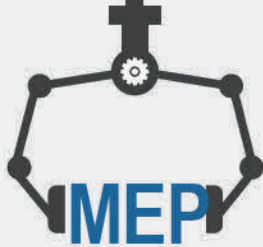
489
Network Learning & Strategic
Competitions Division
Vacant, (Mary Ann Pacelli, Acting
Div. Chief)
Vacant (Temp AA)
Wiza Lequin
Vacant (Program Manager)
Vacant (Program Analyst)
Mike Simpson (Detail Assign)

486
Finance Management & Center
Operations Division
Kevin McIntyre, Chief
Vacant (AA)

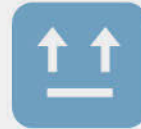
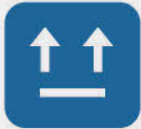
Finance/Administration
Tony Gomez (AO 486, 487)
Autumn Hernandez (AO 481)

486.01
Center Operations Group
Nadine DeJesus, Group Manager
Mellissa Ayala
Sekou Johnson
Julia Shriner
Hope Snowden
Gloria Solomon

**MEP ORG
CHART (57.5 FTE)**



Advisory Board Featured Presentations





NIST MEP Policy Academy Overview

Mark Schmit

NIST MEP

Division Chief, Regional and State Partnerships Division



Manufacturing Policy Academy – Strengthening Your State’s Manufacturers



Manufacturing Extension Partnership





Why States?

- Resources
 - Financial and non-financial
 - Leverage the federal investment to deliver value added services to manufacturers to help them grow and prosper
- Connections
 - Thru their investments places like universities, community colleges, technical schools, economic development, and in public schools
 - Nurturing the ecosystem that supports manufacturing directly and indirectly
- MEP is premised on a partnership model that includes state, regional, and local stakeholders along with private industry to co-invest
- State resources in MEP Centers allows them to leverage the federal investment and expanded their ability to work with more manufacturers and with a larger economic impact
- MEP is not political. But, we exist in a political world.



Why Do the Policy Academy?

States:

To identify issues and opportunities requiring attention in the state and propose approaches (levers, policies, practices, initiatives) for further investigation and possible investment

MEP:

To be part of the conversation

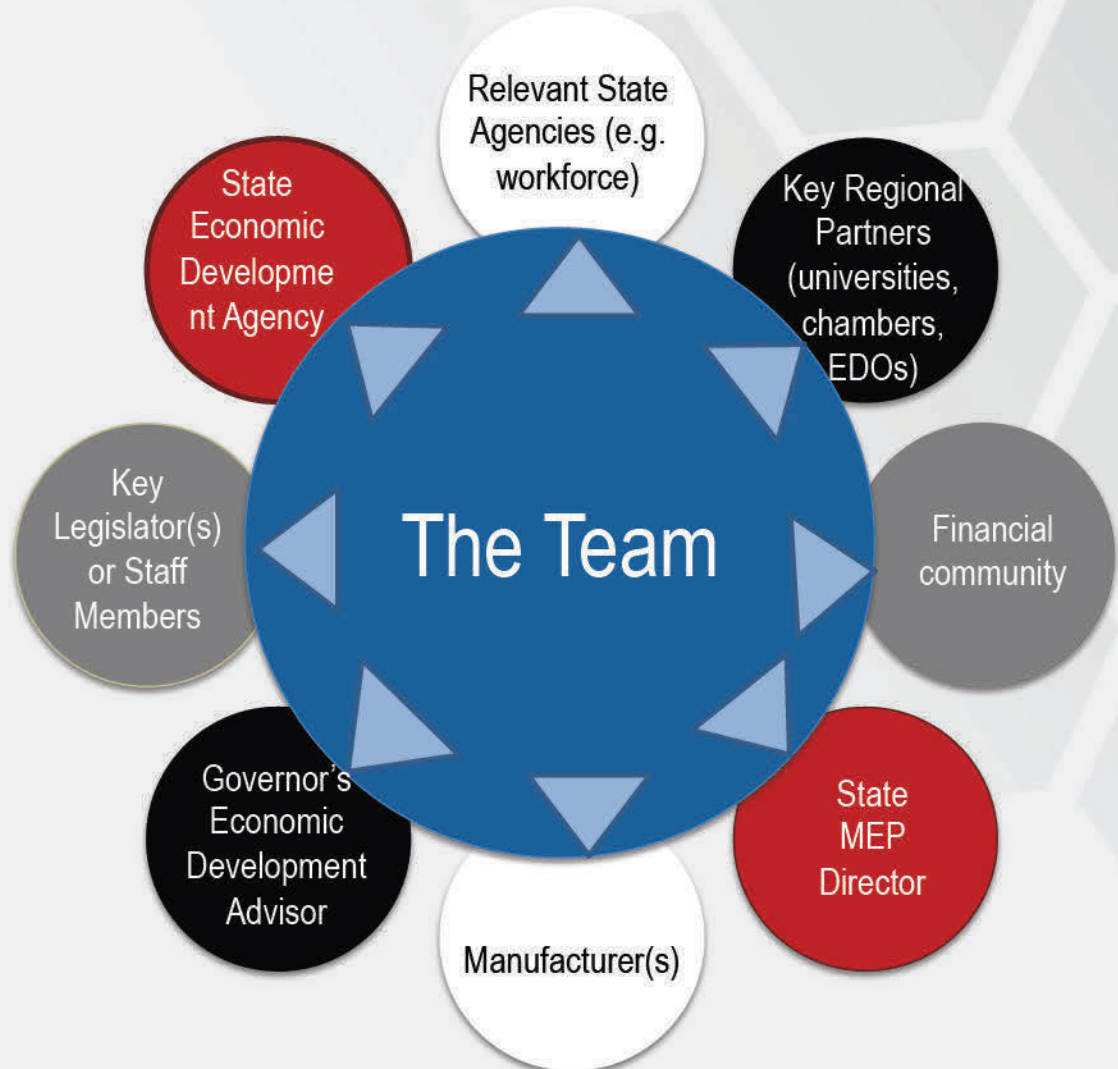


At the Table?

Seven to ten people in pivotal roles in the design, execution and evaluation of a State's improved manufacturing policy.

Participate as appropriate in the in-state site visits and strategic planning meetings.

Participate as appropriate throughout the project year on webinars, conference calls, and in-state groundwork for developing the strategy.





Focus Areas

Addressing talent
gaps

Accelerating
business start-ups
and scale-ups

Promoting exports
and diversified
customer-bases

Enhanced supply
chain linkages for
both big and small
companies

Improving economic
development
ecosystem
efficiency



Potential Outcomes

Invigorated state leadership

New programs and initiatives

Revised program design and delivery

Legislation supporting manufacturing priorities

Executive orders and other actions

Improved economic development ecosystem efficiency



Right Now

- Arizona
- Colorado
- Illinois
- Maine
- Maryland
- Missouri
- North Carolina
- Pennsylvania
- Vermont
- Wisconsin



Break





NIST Cyber CAP Award Update

David Stieren

NIST MEP

Division Chief, Extension Services Division



MEP Authorizing Legislation

15 USC 278 k – 1: Competitive Awards Program

(a) Establishment

The Director shall establish within the Hollings Manufacturing Extension Partnership under section 278k of this title and section 278l of this title a **program of competitive awards** among participants described in subsection (b) of this section for the purposes described in subsection (c).

(b) Participants

Participants receiving awards under this section **shall be Centers, or a consortium of Centers.**



MEP Authorizing Legislation

15 USC 278 k – 1: Competitive Awards Program

(c) Purpose, themes, and reimbursement

(1) Purpose: The purpose of the program established under subsection (a) is to **add capabilities** to the Hollings Manufacturing Extension Partnership, including the development of projects to **solve new or emerging manufacturing problems** as determined by the Director, **in consultation with the Director of the Hollings Manufacturing Extension Partnership, the MEP Advisory Board, other Federal agencies, and small and medium-sized manufacturers.**



NIST MEP CAP Award Summary

- From 2017 – 2019, NIST MEP has made **22** special CAP funding awards to MEP Centers totaling **\$19.278M**
 - 2017: **7 awards** totaling **\$5.139M**
 - 2018: **8 awards** totaling **\$7.041M**
 - 2019: **7 awards** totaling **\$7.098M**
- Awards addressed broad array of topics:
 - Go-to Centers for cybersecurity assistance
 - Industry 4.0 technology acceleration
 - Multiple workforce topics
 - Food Safety, Toyota Kata, Additive Manufacturing
 - Medical device supply chains
- Program authority also used for Special Competitions such as Embedding, Manufacturing Disaster Assistance, Cybersecurity for Defense Manufacturing



CAP Award Highlight 1

Quality Safe Efficient Food Industry Network

- **Lead MEP Center**
 - New Jersey MEP
- **Participating MEP Centers**
 - Georgia MEP
 - Montana Manufacturing Extension Center
 - Nebraska MEP
 - Ohio MEP
 - Plus, potentially all MEP Centers around the National Network
- **Project Terms**
 - \$992K over 2-year period of performance
 - Aug. 1, 2019 start date



CAP Award Highlight 1

Quality Safe Efficient Food Industry Network

- Builds on previous NIST MEP CAP awards to MEP Centers relating to Food Safety Training, Food Safety Modernization Act (FSMA)
- Creates platform for MEP Centers to deliver FSMA, other core MEP products, services (e.g., cybersecurity, supply chain) to food mfg (FM) companies
- Project deliverables:
 - Compilation, development, and digital warehousing of FM Project Engagement Tools
 - Access to more robust FM market intelligence
 - National branding and marketing strategy
 - Coordination of MEP Center training and support via regional hubs
 - Protocols for MEP Centers to coordinate service delivery for projects that involve FM supply chains across multiple states
 - MEP National Network information sharing



CAP Award Highlight 2

Cybersecurity for Defense Manufacturing

- **Lead MEP Center**
 - Michigan Manufacturing Technology Center
- **Participating MEP Centers**
 - Commitments to participate from **44 MEP Centers** at time of proposal preparation, including: AK, AL, AR, AZ, CA, CO, CT, FL, GA, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NH, NJ, NM, NV, NY, OK, OR, PA, PR, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI
 - More Center commitments after proposal submission and award – essentially entire MEP National Network onboard
- **Project Terms**
 - \$1.074M over 17-month period of performance
 - Aug. 1, 2019 start date



CAP Award Highlight 2

Cybersecurity for Defense Manufacturing

- Conducted in conjunction with NIST MEP – DoD Interagency Agreement funded by DoD
- Provides guidance and hands-on assistance to small and medium-sized defense contractors in understanding and implementing DFARS cybersecurity requirements
- Targets reaching 1,000+ defense contractors
- Cybersecurity priorities addressed by this project include:
 - Identification of geographic areas in the U.S. with high concentration of Defense contractors – and means to serve these contractors via MEP
 - Awareness/educational outreach events – in person and online
 - Hands-on technical assistance activities
 - “Use case” development and implementation for manufacturing operational technology protection
 - Enhancement of MEP National Network cybersecurity assistance services



CAP Award Highlight 3

Industry 4.0 Technology Acceleration Program

- **Lead MEP Center**
 - Oregon MEP
- **Participating MEP Centers**
 - Illinois Manufacturing Excellence Center (IMEC)
 - Michigan Manufacturing Technology Center
 - New Mexico MEP
 - Ohio MEP
 - Pennsylvania MEP
 - South Carolina MEP
 - Plus, potentially all MEP Centers around the National Network
- **Project Terms**
 - \$1M over 1-year period of performance
 - Aug. 1, 2019 start date



CAP Award Highlight 3

Industry 4.0 Technology Acceleration Program

- Connect viable Industry 4.0 resources (I4.0) to small U.S. manufacturing companies, via MEP Centers
- Technical assistance providers that can work with typical MEP Center clients are generally not well-known or vetted for performance
- Project will:
 - ID and vet appropriate I4.0 vendors that can serve MEP Center client profile
 - Adopt new technologies from among list of 9 distinct I4.0 technologies
 - ID MEP National Network approved “Go-To MEP Center leads” to provide consistency of product delivery, train-the-trainer material to MEP staff nationally, and continuing R&D of manufacturing applications that touch I4.0 nodes
 - Provide clear path for SMMs to connect with experts in MEP National Network, through MEP Center leads and/or approved providers



MEP
National
Network™

Strategic Plan Update



MEP National Network 2017-2022 Strategic Goals





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

Advisory Board
Center Boards
ASMC/FORME
Collaborative Support
Network Learning and Comp
PEER

Important Support

FM/Center Ops
Admin
IT/Security
Staff Resource Mgmt

LEVERAGE PARTNERSHIPS

Primary

51 Centers/CLT
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

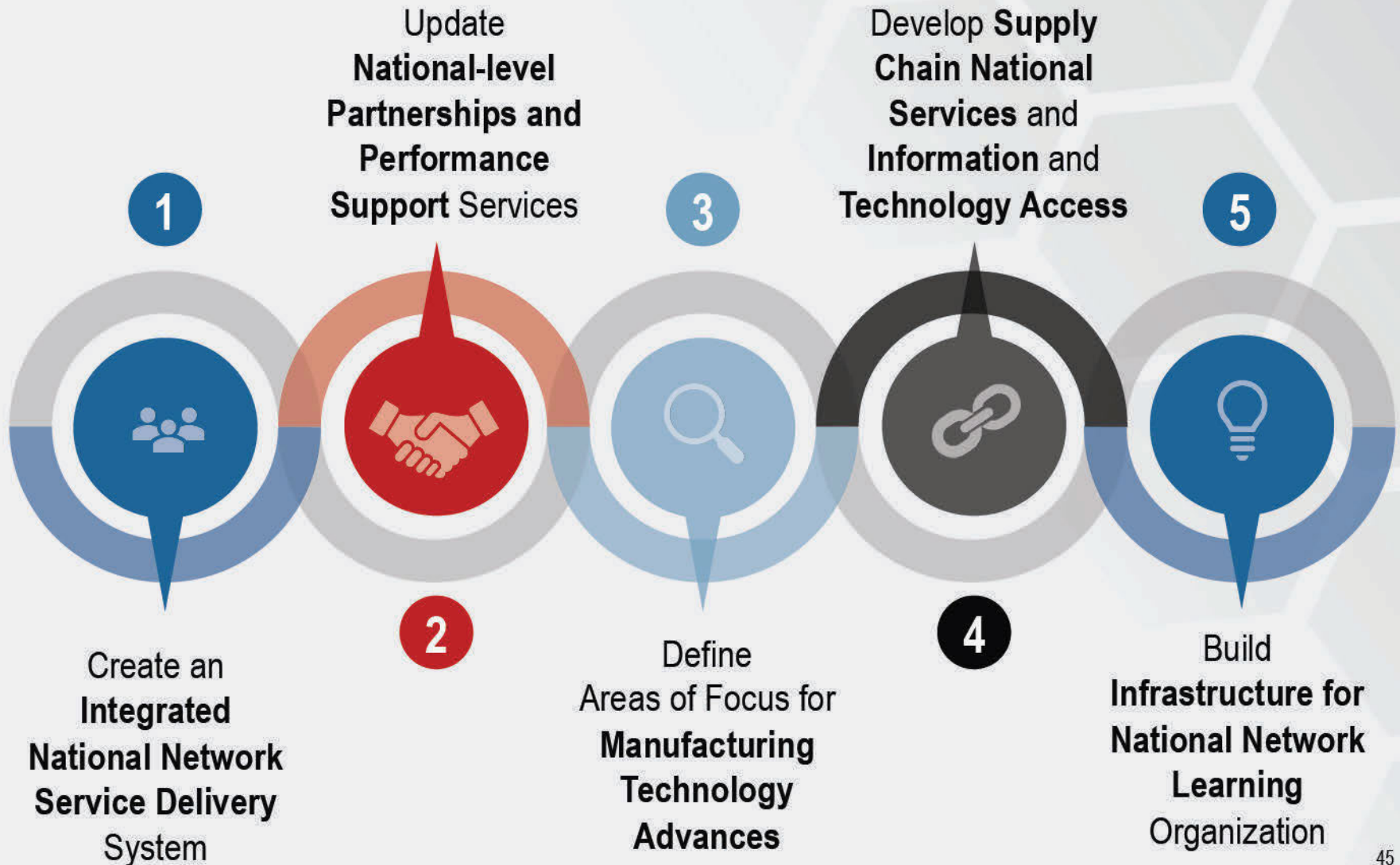
51 Centers/CLT
NIST MEP (All)

Collaborative Support

Advisory Board
Center Boards
ASMC/FORME



18-Month Network Priorities



Integrated National Network

of Centers in multi-Center delivery projects

Efficiency in Small/Rural Engagements

of engagements through third party partnerships and increased longer-term impactful projects

Center and Program Office Operational Excellence

of Centers participating and # of implementation projects in Program Office

Increased Visibility

MEP National Network brand awareness

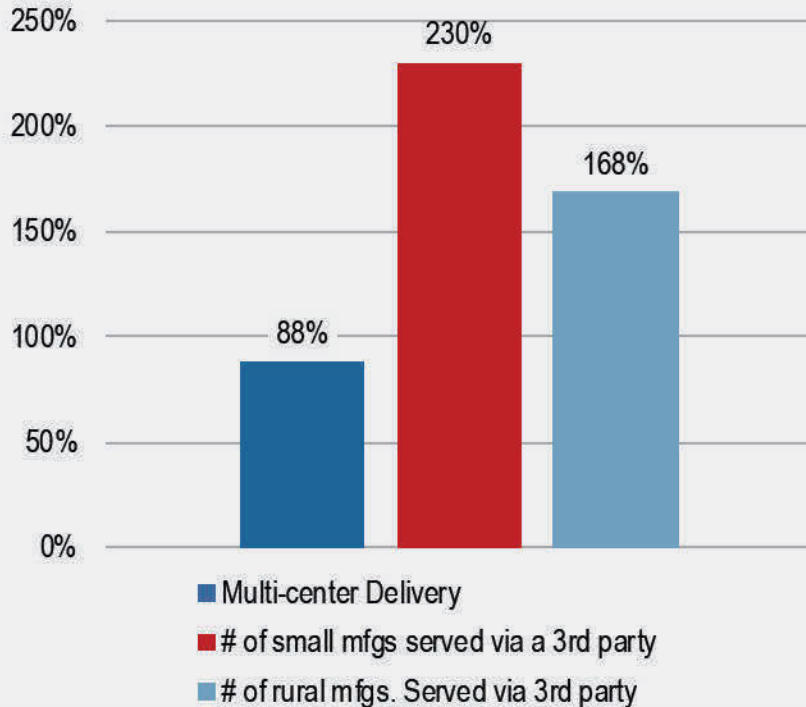
**Measures
of
Success:
Baselines**



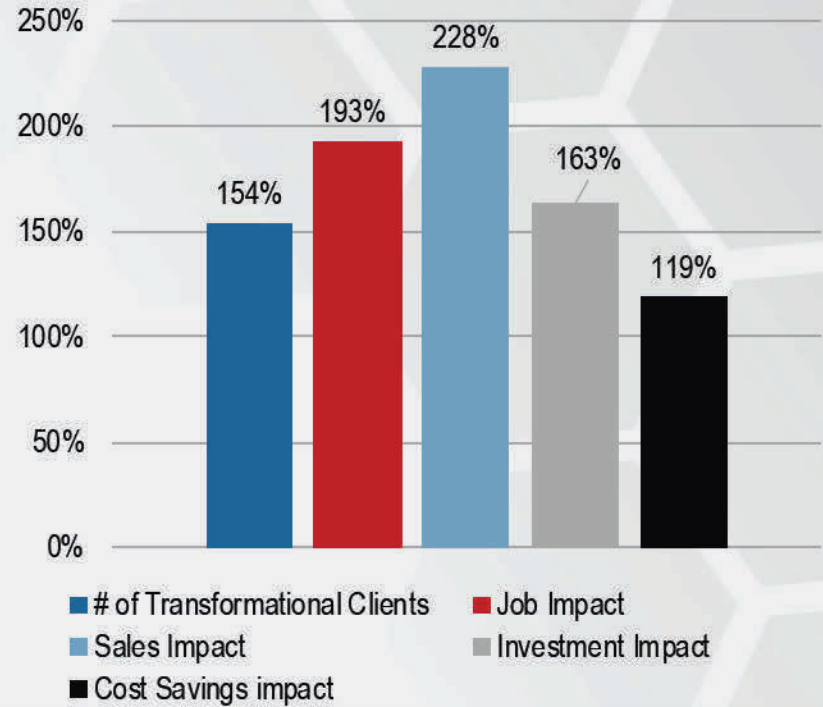
Progress Through First 12 Months

18-Month Measures of Success to Goals

% of Goal as of Q2 2019



% of Goal as of Q1 2019



Increased awareness of the MEP National Network brand by 10% over base brand recognition measurement a year after the Network launches the brand.

- For Q2 MEP National Network had **370 instances of branded searches vs. baseline of 350**
- For Q2 MEP National Network webpage received **763 page views vs. baseline of 695**
- For Q2 MEP National Network webpage had **88 backlinks vs. baseline of 14**



Operational Excellence

18-Month Measures of Success to Goals

MEP Centers – Tons of incredible work happening

- 9 Centers (AR, AZ, KY, ME, PR, SD, VT, WV, and WY) have 100% of clients responding to the NIST MEP client impact survey this most recent quarter.
- 11 Centers maintained consistent performance from Q1 2018 to Q1 2019. Centers that achieved 100 on the IMPACT metrics in both periods include AR, HI, IN, ME, MI, OK, PA, PR, SC, SD, and VT.
- 31 Centers exceeded the unique client served metric in Q1 2019. The client served metric standard is 73 clients per \$1M of federal investment.

NIST MEP – Not to be outdone!

- Expanded Center financial best-practices reviews to include all 51 MEP Centers.
- OMB published 2019 MEP Uniform Guidance Single Audit Compliance Supplement.
- Improved communications and collaboration between RMs and FPOs.
- All MEP Center renewals processed on time to GMD.

Consensus Within Integrated National Network

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

Center and Program Office Operational Excellence

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

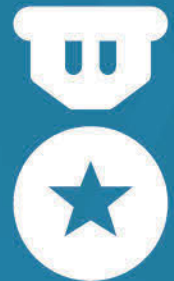
Increase Projects and New Clients

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

Increased Visibility

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

**18-Month
Goals
Moving
Forward**





Baselines Moving Forward: 18-Month Measures of Success

Baseline for projects is
14,109 projects

Increase projects by 10%

Baseline for new clients is
4,101 new clients

Increase New Clients by 5%

Increased awareness of the MEP National Network brand by 10% over base brand recognition measurement.

- Baseline will be established using data collected in FY20, Q1 and will be measured quarterly moving forward.
- Measures of brand awareness to include:
 - Backlinks
 - Online occurrences of key Network terms such as “MEP National Network”
 - Network social media reach and engagement
 - NIST MEP social media followers/new followers
 - Manufacturing Innovation blog subscribers/new subscribers
- Dashboard will indicate aggregated quarterly progress with featured highlights.



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

Operational Excellence

18-Month Measures of Success to Goals



Show baseline measurement of on-time reporting and accurate reporting to measure progress against goal.



MEP
National
Network™

Presentation and Group Activity: Board Engagement with the MEP National Network

Board Engagement with the MEP National Network

About the MEP Advisory Board

The statutory purpose of the Board is to provide advice and recommendations to the NIST Director on the following items:

- The activities, plans and policies of MEP
- The soundness of MEP's plans and strategies
- Current performance in relation to MEP Program





NNCLT is focused on Engaging Centers

KEY AREAS



- **Infrastructure**
 - MEPNNCLT Governance
 - Multi-State Engagement Process
 - Committee participation



- **Communications**
 - Integration with NIST MEP and FORME
 - Developing Content



- **Expand Industry 4.0 Capabilities**
 - Establishing “Go To” Center Collaboratives and Satellites
 - Repository for Center Expertise and Best Practices
 - Regular structured Learning Sessions



Board Engagement with the MEP National Network

Combined MEP Advisory Board and Center Board

Leaders: **Roundtable Discussions**

- Each table assigned a specific question/topic
- Local Center Board Chairs matched with MEP Advisory Board Members and NIST MEP Resource Managers



Roundtable Discussion/Questions

Moving Forward: 18-month goals of increasing reported projects and new clients – How can Center Boards support their MEP Centers in reaching those goals?

If you could write a letter to the DOC or to Congress, what would you identify as your state's biggest manufacturing challenges and what help, resources or information would you like to see?

The MEP National Network: How do we learn from one another, stay connected, take full advantage of the MEP National Network's resources?



Lunch Break



Welcome Back – Afternoon Overview

1:35-2:25 p.m.	Working Group Update Supply Chain Development Working Group <ul style="list-style-type: none">• Board Feedback and Discussion
2:25-3:05 p.m.	Working Group Update Executive Committee Working Group <ul style="list-style-type: none">• Board Feedback and Discussion
3:05-3:30 p.m.	Wrap up and Public Comments



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, Phil Singerman, 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 assistance
- Working with the DOD-sponsored Manufacturing USA Institutes

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



Supply Chain WG Deliberation Highlights

MEP and the Manufacturing USA Institutes

- Embedding Pilot Project awards complete or nearing completion in 2020.
- Initial results and learnings summarized in March 2019 report.
 - SMMs tend to explore opportunities before making decisions to commit or implement; interested in demo sites, interactive experiences to help understand technologies.
 - SMMs interested in state-of-the-art techs that can be leveraged in near term, as opposed to R&D-based intellectual property (IP) – SMM needs must match Institute outputs.
 - Local resources (less than a two-hour drive) are particularly helpful for engagement.

LEAD MEP CENTER		MFG USA INSTITUTE & SPONSORING AGENCY
CA MEP	Round 2 Award	CESMII - DOE
CA MEP	Round 1 Award	Next Flex – DOD
DE MEP	Round 3 Award	NIIMBL – NIST
Illinois Mfg Excellence Center	Round 1 Award	MxD – DOD
Mass MEP	Round 2 Award	AFFOA – DOD
Mass MEP	Round 3 Award	BioFab USA – DOD
Michigan Mfg Tech Center	Round 2 Award	LIFT – DOD
NC MEP	Round 1 Award	Power America – DOE
NY MEP	Round 1 Award	AIM Photonics – DOD
NY MEP	Round 3 Award	REMADE – DOE
OMEP	Round 3 Award	RAPID – DOE
PA MEP	Round 3 Award	Advanced Robotics – DOD
PA MEP	Round 2 Award	America Makes – DOD
TN MEP	Round 1 Award	IACMI - DOE



Additional Updates

NIST MEP developing Notice of Funding Opportunity (NOFO) for MEP Centers for release in 2020 as follow-on to MEP Center – Mfg USA Institutes Embedding Pilot Projects

- Focus on **Advanced Manufacturing Technology Services** from MEP Centers to SMMs in broad area of **Industry / Manufacturing 4.0**
- Emphasize **connectivity of physical and cyber systems** in manufacturing factories and supply chains
- Target **market-ready, cross-cutting infrastructural technologies** that can be applied across multiple industries, including:
 - Additive mfg, robotics, digital manufacturing, cybersecurity, smart manufacturing, others
 - Automotive, aerospace, biomanufacturing, chemical, communications, defense, food, instrumentation, medical equipment, others
- Collaborations **with technical resource entities at national, state, local level** encouraged



Cybersecurity Sept. 2019

Development of MEP National Network cybersecurity assistance for small manufacturers is progressing to level of nationwide capability

- Continues to be spurred by strong partnerships with DoD
 - Office of the Undersecretary of Defense for Research and Engineering (OUSDR&E)
 - Office of the Undersecretary of Defense for Acquisition and Sustainment (OUSDA&S)
 - Office of the Chief Information Officer (OCIO)
 - Office of Economic Adjustment (OEA)
 - Defense Acquisition University (DAU)
 - Procurement Technical Assistance Centers (PTACs)
- Remains mainly driven by Defense Federal Acquisition Regulation Supplement (DFARS) requirements for defense sector



NIST Cybersecurity and Small Manufacturers Supplying to DoD



National Defense Authorization Act 2019, HR 5515 (Jan 2018)

SEC. 1644. ASSISTANCE FOR SMALL MANUFACTURERS IN THE DEFENSE INDUSTRIAL SUPPLY CHAIN AND UNIVERSITIES ON MATTERS RELATING TO CYBERSECURITY.

“The Secretary of Defense, in consultation with the Director of the National Institute of Standards and Technology, shall take such actions as may be necessary to enhance awareness of cybersecurity threats among small manufacturers and universities working on Department of Defense programs and activities.”

National Defense Authorization Act 2020, HR 2500 (Jul 2019)

SEC. 853. REVISED AUTHORITIES TO DEFEAT ADVERSARY EFFORTS TO COMPROMISE UNITED STATES DEFENSE CAPABILITIES.

“The Secretary of Defense shall consult with the Director of the Hollings Manufacturing Extension Partnership (established under section 25 of the National Institute of Standards and Technology Act (15 U.S.C. 278k)) to provide education, guidance, and technical assistance to strengthen the cybersecurity of small- and medium sized manufacturers that provide goods or services in the supply chain for the Department of Defense.”



Highlights: MEP Cybersecurity and the DoD

- NIST MEP – OUSDR&E Interagency Agreement (IAA) providing \$1.074M in special project award funding from NIST MEP to MEP Centers to serve cyber needs of small defense manufacturing suppliers between Aug. 1, 2019 and Dec. 31, 2020
- Led by MEP Center in MI; target serving 1,000+ small defense contractors
- Provide nationwide cybersecurity awareness, hands-on technical assistance, and pilot operational technology (OT) protections
 - Includes collaboration with NIST Labs
 - Also includes collaboration with MxD Manufacturing USA Institute in Chicago
- MEP Center participation likely to occur in >20 states, in addition to MI:
 - AL, CA, CO, CT, IL, KY, LA, MA, MO, MS, NC, NJ, NY, OH, PA, RI, SC, TX, WA, WI



Highlights: MEP Cybersecurity and NIST Laboratories

NIST MEP and MEP Centers working with NIST Labs to develop new **NIST Implementation Guidance** for NIST Cybersecurity Framework Manufacturing Profile.

- MEP Centers providing “Use Cases” from two representative small U.S. manufacturers that will be used by NIST Labs in next iteration of Manufacturing Profile Implementation Guidance.
- 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 two participating manufacturers.



MEP National Network Cybersecurity Summary

- U.S. manufacturing sector still **not showing much action** for cybersecurity implementation in **non-defense manufacturing industries**.
 - Small manufacturer cyber protections **low relative to larger companies**
- Monitoring non-defense supply chains such as automotive, food processing
- MEP Centers' provision of cybersecurity assistance to small manufacturers demonstrating operation of MEP National Network in conduct of multi-Center assistance
 - **Cyber-in-a-Box available to MEP Centers** providing necessary info for MEP Center to begin / operate cybersecurity assistance practice



NIST Cybersecurity Framework

NIST MEP Cybersecurity Resources

1. Identify

- Identify and control who has access to business information
- Conduct background checks
- Require individual user accounts for each employee
- Create policies and procedures for cybersecurity

2. Protect

- Train employees and limit employee access to data
- Install surge protectors and uninterruptible power supplies
- Patch operating systems and applications routinely
- Install and activate firewalls on all business networks
- Secure wireless access points and networks
- Set up web and email filters
- Use encryption for sensitive information
- Dispose of old computers and media safely

3. Detect

- Install and update anti-virus, anti-spyware, and other anti-malware programs
- Maintain and monitor logs
- Note unusual password activity

4. Respond

- Develop and maintain a plan for disasters and cyber incidents
- Notify your customers and the authorities

5. Recover

- Make full backups of important business data and information
- Schedule incremental backups
- Improve processes, procedures, and technologies



NIST Special Publication 800-171

Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations

NIST MEP Cybersecurity Self-Assessment Handbook For Assessing NIST SP 800-171 Security Requirements in Response to DFARS Cybersecurity Requirements

NISTIR 7621
Revision 1

Small Business Information Security: *The Fundamentals*



MEP
National
Network™

Cybersecurity Assessment Tool



MEP National Network Progress: Cybersecurity Assistance Practice Sept. 2019

>3,200 Small
Manufacturers served
by MEP Centers
Nationwide

~220 Awareness
& Training Events
conducted by MEP
Centers Nationwide



496 cybersecurity
projects conducted for
U.S. manufacturers by
MEP National
Network since 2014

Expanding capabilities
across Network

NISTIR 7621 “Small Business Information Security: The Fundamentals” downloaded over
132,000 times since published by Pat Toth, NIST MEP, in Nov. 2016.



MEP National Network Progress: Cybersecurity Assistance Practice Sept. 2019

- **19 MEP Centers** have received ~\$9M OEA funding, focused on working with state-based org
- Focus on cyber workforce training and education
- NIST Handbook 162 downloaded ~**60,000** times since Nov. 2017 NIST MEP publication
- Pat Toth, NIST MEP, author



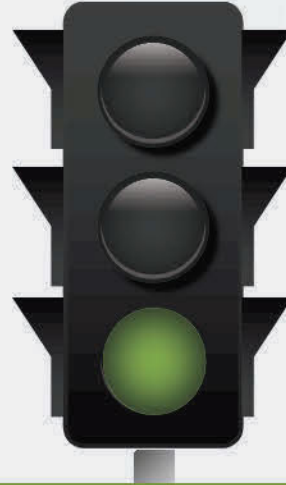
- MEPNN Cybersecurity Working Group (WG) meets every 6 weeks
- WG workshop held in Orlando, May 2019
- WG workshop planned for Sept. 2019 in Atlanta



MEP National Network Cybersecurity Progress Summary Sept. 2019



Defense Contractor
Cybersecurity
Implementation Still
Low



46 MEP Centers in
Cybersecurity WG



45/51 MEP
Centers with Cyber
Practice

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



Additional Updates

NIST MEP engaging “Shared Assist” collaboration of defense/aerospace primes on behalf of MEP National Network.

- Collaborating to develop **common approaches** and trusted resources for **supply chain implementation of cyber protection**. Includes **Lockheed, Northrop Grumman, Boeing, Raytheon, BAE Systems**.
- Resulted from Spring 2019 executive level engagement between Lockheed leaders and NIST Assoc Dir for Innovation and Industry Services, NIST MEP Leadership.
- Leveraging MEP Centers to **raise supply chain awareness** and provide **technical assistance** based upon OEM common cyber approaches and trusted resources.
- Exploring **OEM participation in DFARS cyber awareness events** around the country in 2019, 2020.



Additional Updates

New DoD Cybersecurity Maturity Model Certification (CMMC) Program being developed.

- Planned implementation by **early 2021**.
- NIST MEP working with DoD to learn evolving details of this future new policy, including **implications of its implementation**.
 - OUSDR&E rep to participate in MEPNN WG Mtg in Atlanta.
- NIST MEP providing **ongoing guidance to MEP Centers' approach**
 - Does not currently impact Centers' engagements with small defense contractors.
 - Does not currently negate or supersede DFARS requirements.



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
- Learn about your assigned Centers

MAB Outreach Toolkit

- List of your connections:
States/MEP Centers
- Detailed MEP Center
one pager for each
- Contact names and info
(highlighted if attending Summit)



Board Activities into 2020

Supporting/mentoring new members

Three new members on the horizon



MEP Advisory Board succession into 2020



New Working Group discussion

Strategic Plan for the next five years





Future Meeting Schedule

2020

Tuesday, March 3, 2020

NIST Campus

Gaithersburg, Maryland

Board Dinner on Monday, March 2, 2020

(Prior to Hill Day in Washington, D.C.)

Middle of June*

Location TBD

Middle of Sept.*

In conjunction with the MEP National Network Update Meeting and FORME Best Practice Conference

*Timing Subject to Change



Thank You

Stay Connected



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