

MEP Advisory Board

Sept. 13, 2023

This is a simplified version of the presentation for website purposes.
A full version may be requested by emailing Cheryl.Gendron@nist.gov

FACA and the Advisory Board

- The MEP Advisory Board is authorized under Section 3003(d) of the America COMPETES Act (Pub. L. 110–69), as amended by the American Innovation and Competitiveness Act, Public Law 114–329 sec. 501 (2017), and codified at 15 U.S.C. 278k(m), in accordance with the provisions of the Federal Advisory Committee Act, as amended, 5 U.S.C., App.

Welcome to Buffalo!

- **Bernadine Hawes**
- MEP Advisory Board, Chair

- **Don Bockoven**
- MEP Advisory Board, Vice Chair

Introductions

The MEP Advisory Board

Chair: **Bernadine Hawes**, Econsult Solutions, Inc.

Vice Chair: **Donald Bockoven**, Darling Fibers

Beth Bafford, Calvert Impact

Louis Foreman, Enventys Partners

Gail Friedberg Rottenstrich, Zago Manufacturing Company, Inc.

Michael Garvey, M-7 Technologies

Sean Ketter, Oshkosh Corporation

Miriam Kmetzo, Welding Technology Corp.

Chris Mathews, National Custom Hollow Metal Doors and

Frames & Maple Leaf Awning & Canvas

Pat Moulton, Vermont State Colleges' Workforce Division

Dr. Annette Parker, South Central College

Tyrome Smith, Common Mission Project

David Vasko, Industry Consultant

John T. Smooth, Wood-Mizer

Welcome to Buffalo!

- **Pravina Raghavan**
- MEP Director

Day One Agenda

MAB Meeting Details

Wednesday, Sept. 13, 2023

Welcome and Introductions

Program Update, Part One

Meeting Break to Participate in MEPNN Forum Lunch and Plenary

Program Update, Part Two

Strategic Plan – Metrics Discussion

Meeting Break

MEPNN Workforce Panel and Discussion

Public Comments and Meeting Wrap Up

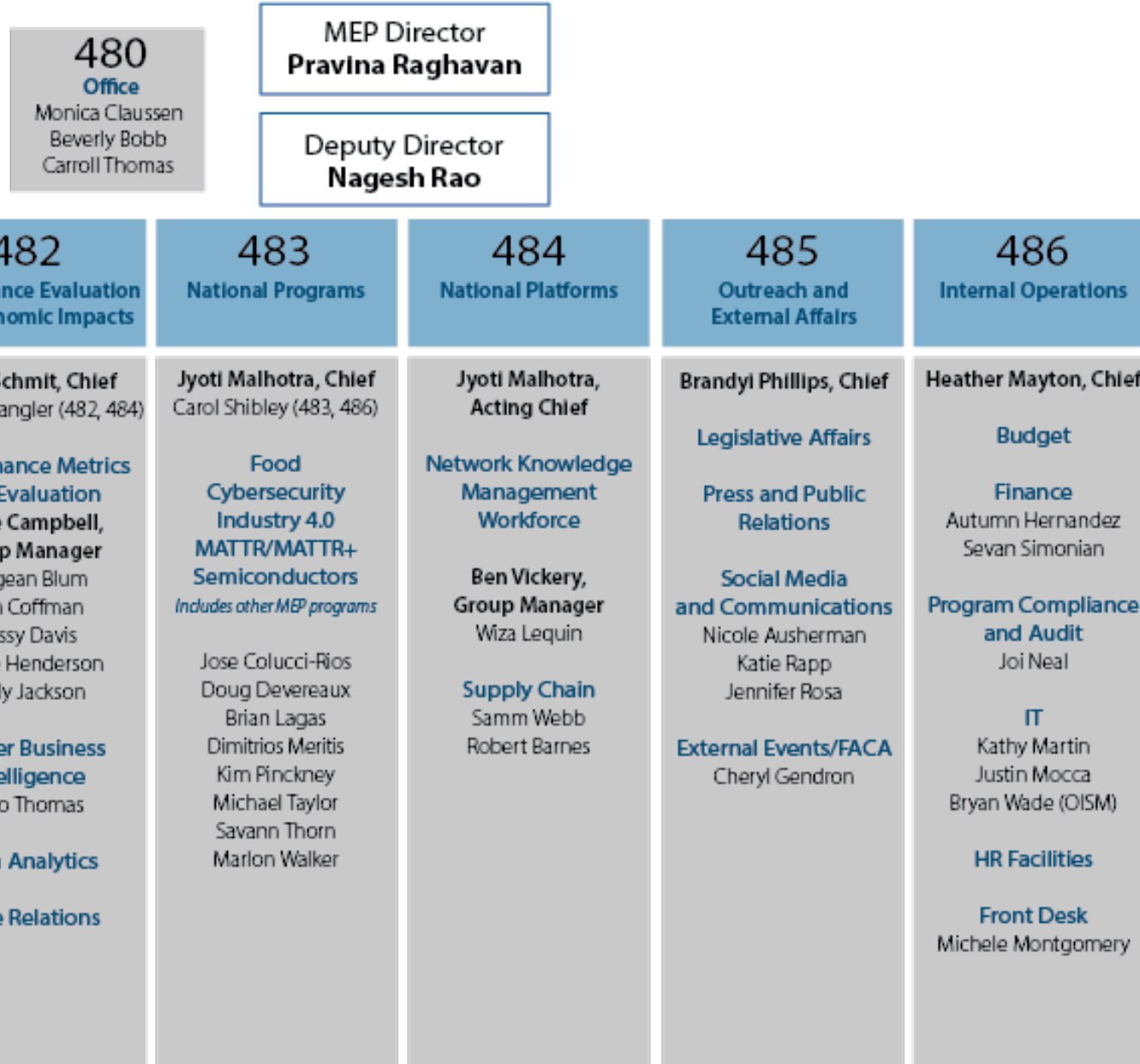
MEP Director's Update

- Mojdeh Bahar, Associate Director for Innovation and Industry Services
NIST
- New NIST MEP Deputy Director, G. Nagesh Rao

Other New NIST MEP Team Members

- Division 483 – National Programs
 - Savann Thorn, Cyber Specialist
- Division 485 – Outreach and External Affairs
 - Brandyi Phillips, Division Chief Outreach and External Affairs
- Division 486 – Internal Operations
 - Joi Neal, Program Compliance and Audit Liaison
 - Sevan Simonian, Administrative Officer

NIST MEP Org Chart



Helping SMMs Overcome Challenges

Narrowing the
workforce gap

Mitigating supply chain
vulnerabilities

Leveraging
technology

Supply Chain Optimization and Intelligence Network (SCOIN)

- Supply Chain Optimization Operational Team
- Webinars and trainings
- Knowledge of manufacturing ecosystem
- OEM mapping
- Identify critical sectors and your support
- Map-out critical and new industries important to U.S. Government
- Gathering, storing and sharing data
- FTE and report progress
- Success stories
- What is not working stories
- Other goals

This is an investment from MEP into the MEP National Network to build a sustainable program or offerings in supply chain.

This is a collaboration between NIST MEP and MEP Centers.

New Structure for Working Groups

Strategic plan Implementation Groups consisting of:

- MEP Advisory Board
- Center Leadership Team
- MEP Center Directors
- Key Stakeholders (including OEMs)

Three groups focused on the strategic pillars:

- Supply Chain
- Workforce
- Technology and Innovation

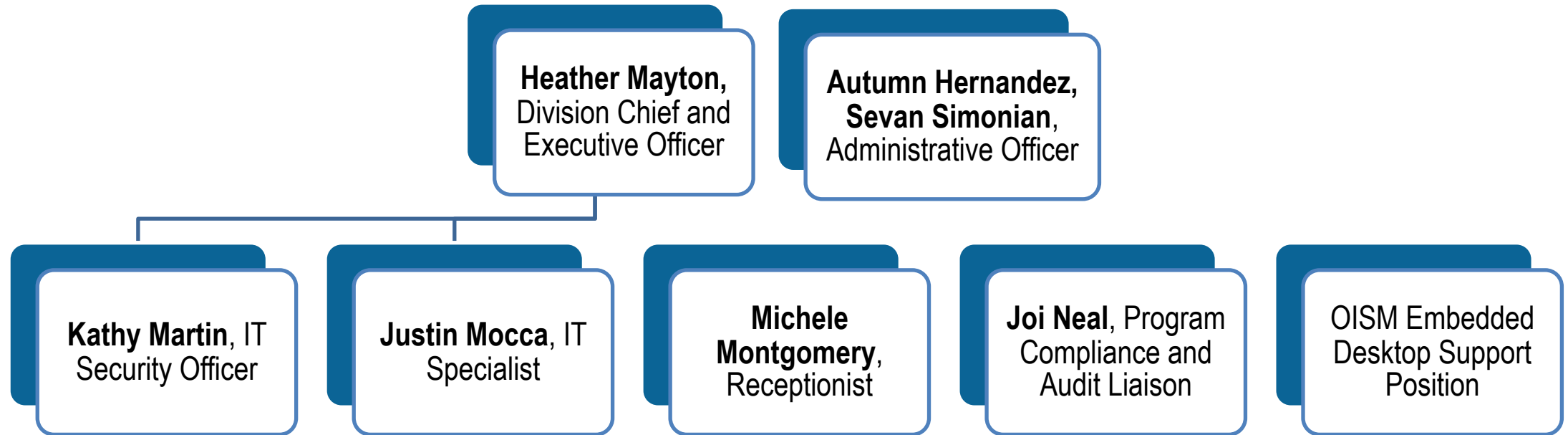
Operational Groups

- One focus group for Supply Chain Optimization
- Communities of Practitioners
 - I4.0/Cybersecurity
 - Food Processes
 - Semiconductor
 - Toyota Kata
 - Workforce
 - Marketing
 - Performance Metrics
 - Learning Management
 - Financial Management

MEP Advisory Board

486: Internal Operations Division

Internal Operations Division



Internal Operations: Division Overview

Build effective
collaboration with MEP
staff and internal/external
stakeholders

Budget

Human Resources

Program Compliance

Audits

IT Security and IT access
for MEP staff

Property

Administrative
Operations of MEP

MEP Program Budget Outlook

FY 2023

Appropriation Status

- \$175 million for MEP
- \$13 million in disaster supplemental
- Funding not subject to cost share requirements (elective for Centers receiving state funds conditioned on federal cost share requirement)

FY 2024

Appropriation Status

- \$277.2 million for President's budget
- \$200 million House
 - Includes cost share relief
- \$175 million Senate
 - No cost share relief

*Numbers are subject to change

NIST MEP Projected Spend Plan Through Sept. 30, 2023

| <u>Available funding:</u> | \$ Millions |
|---------------------------|-------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| <u>Other Funding:</u> | \$ Millions |
| Earmark | 1.0 |

11.22% efficiency rate

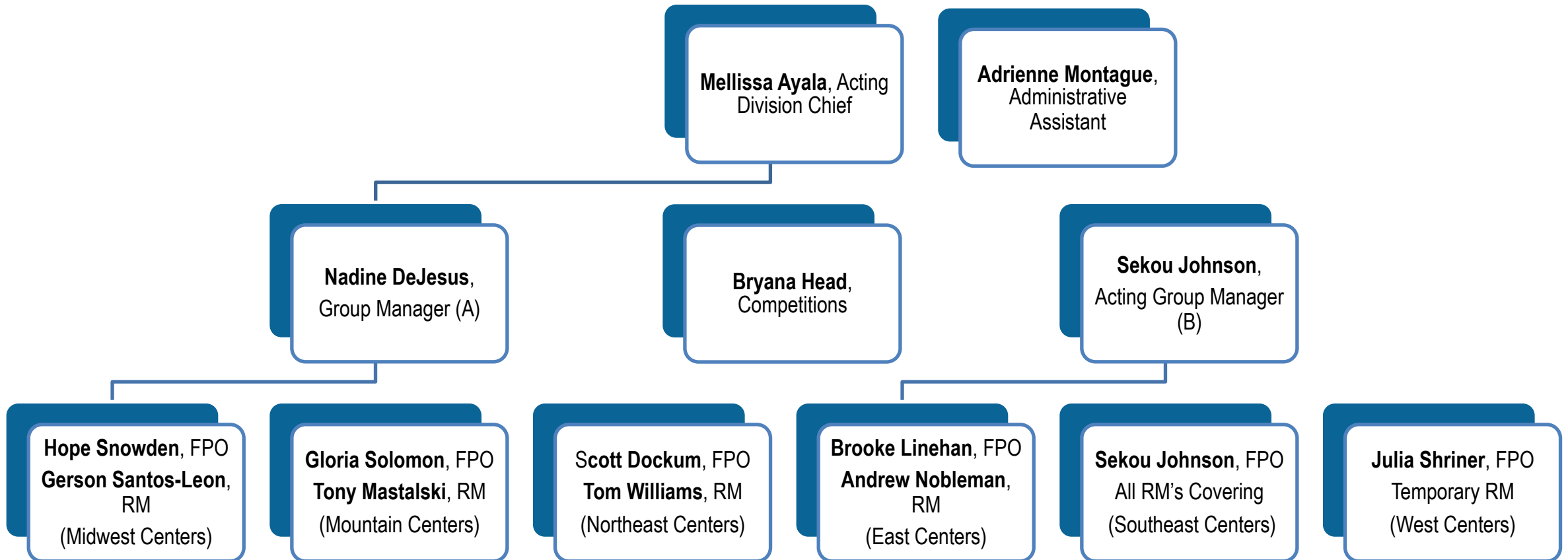
*Numbers are subject to change

| <u>Planned expenditures:</u> | \$ Millions |
|-----------------------------------|--------------|
| Center renewals | 134.6 |
| RCAP/MSE | 1.3 |
| Expansion awards | 20.4 |
| Disaster Awards | 0.3 |
| Contracts | 6.2 |
| NIST MEP labor | 11.0 |
| NIST and program overhead | 20.2 |
| Total planned expenditures | 194.0 |

MEP Advisory Board

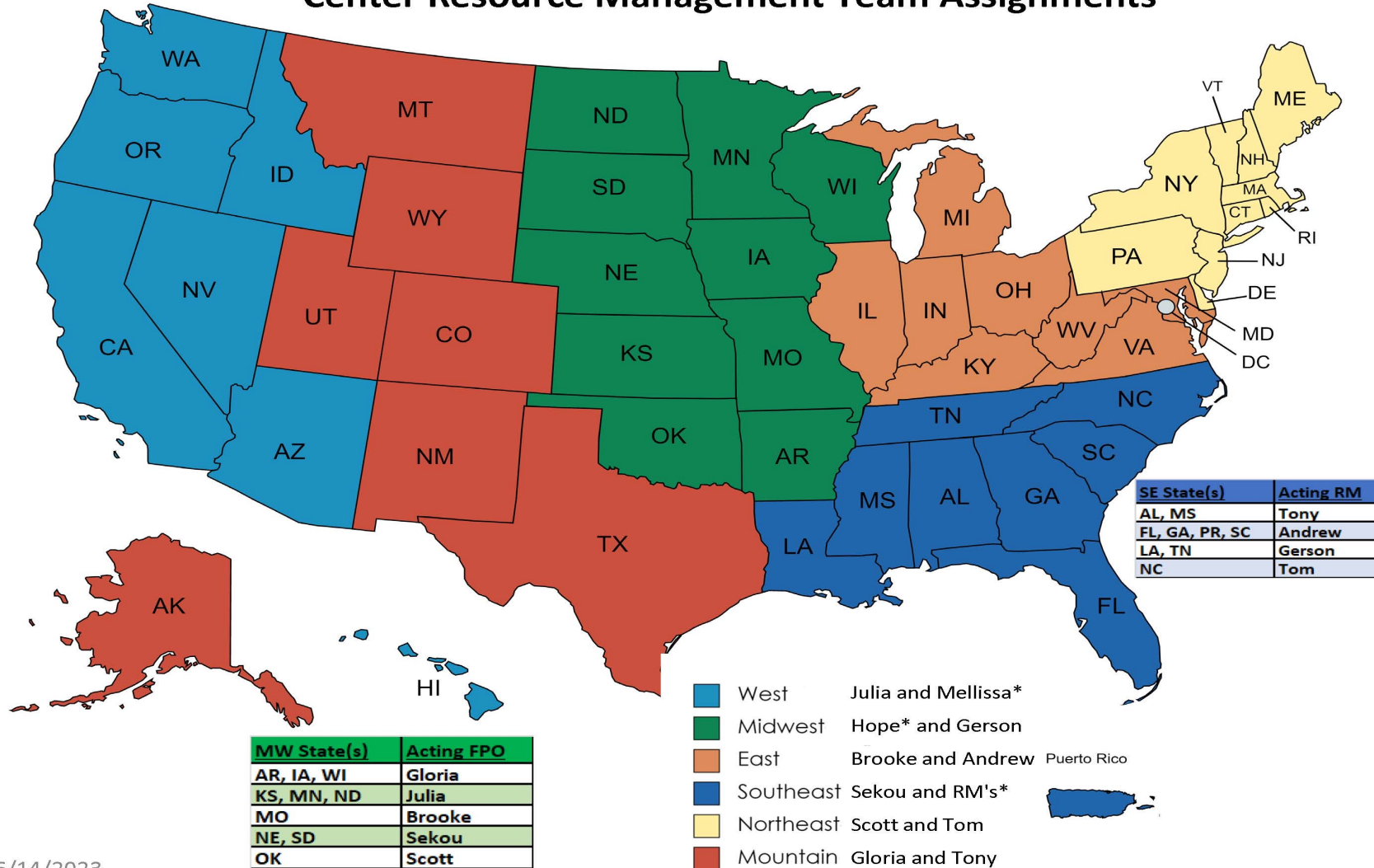
481: Network Agreements Management
Division

Network Agreements Management Division (NAMD)



Center Resource Management Team

Center Resource Management Team Assignments



6/14/2023

*Temporary Coverage

Center Resource Management Teams (CRMTs)

Consists of a Federal Program Officer (FPO) and a Resource Manager (RM).

Shared responsibility for providing financial and programmatic oversight of NIST funds awarded to MEP Centers.

Provide guidance, support and operational assistance to Centers in fulfilling the terms of the cooperative agreement.

Monitor Center's programmatic and financial performance and recommend corrective actions where appropriate.

NAMD Roles and Responsibilities

Establishment and programmatic oversight of cooperative agreements for funding MEP Centers in support of the MEP mission.

Work with MEP Centers

Provide guidance and assistance with cooperative agreement compliance

Provide programmatic assistance to foster MEP Center growth and development

Strengthen strategic alliances with local and regional entities

Maintain partnership relationships to facilitate Center improvement

Conduct competitions for base MEP and strategic awards

Work with NIST MEP, NIST and DOC to ensure program integrity and compliance

PEEI (Award Performance and Evaluation)

National Programs (I4.0, MATTR+, Food Safety)

National Platforms (Network Learning, Supplier Scouting Team)

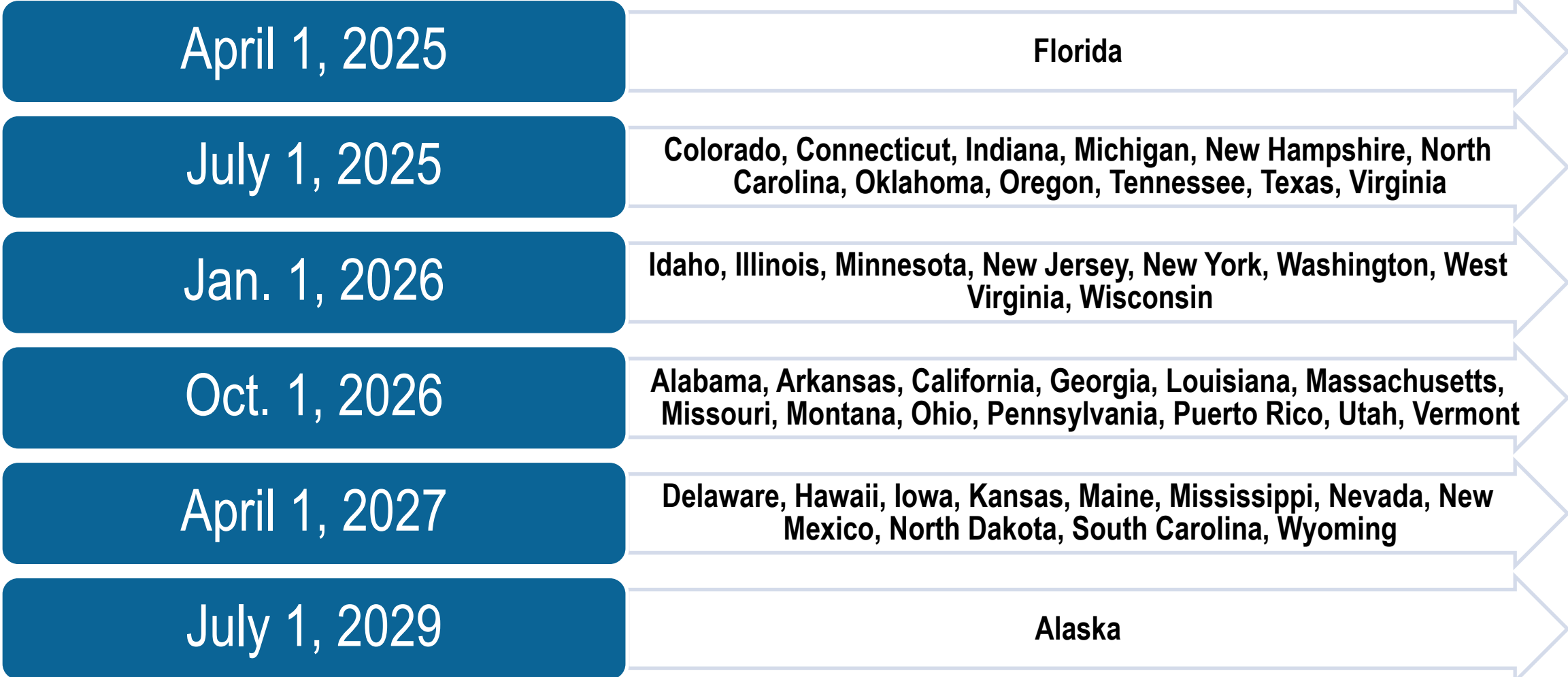
Grants Management Division (GMD)

DOC Federal Assistance Law Division (FALD)

New Awards

- **Supply Chain Optimization and Intelligence Network Awards**
 - All 51 Centers: Awarded June 1
- **New Center Awards**
 - Arizona and Maryland: Awarded July 1
 - Kick-off meetings conducted onsite in Phoenix and Columbia
 - Maryland MEP now supports the MEP program for the District of Columbia

Recompetition of the MEP National Network

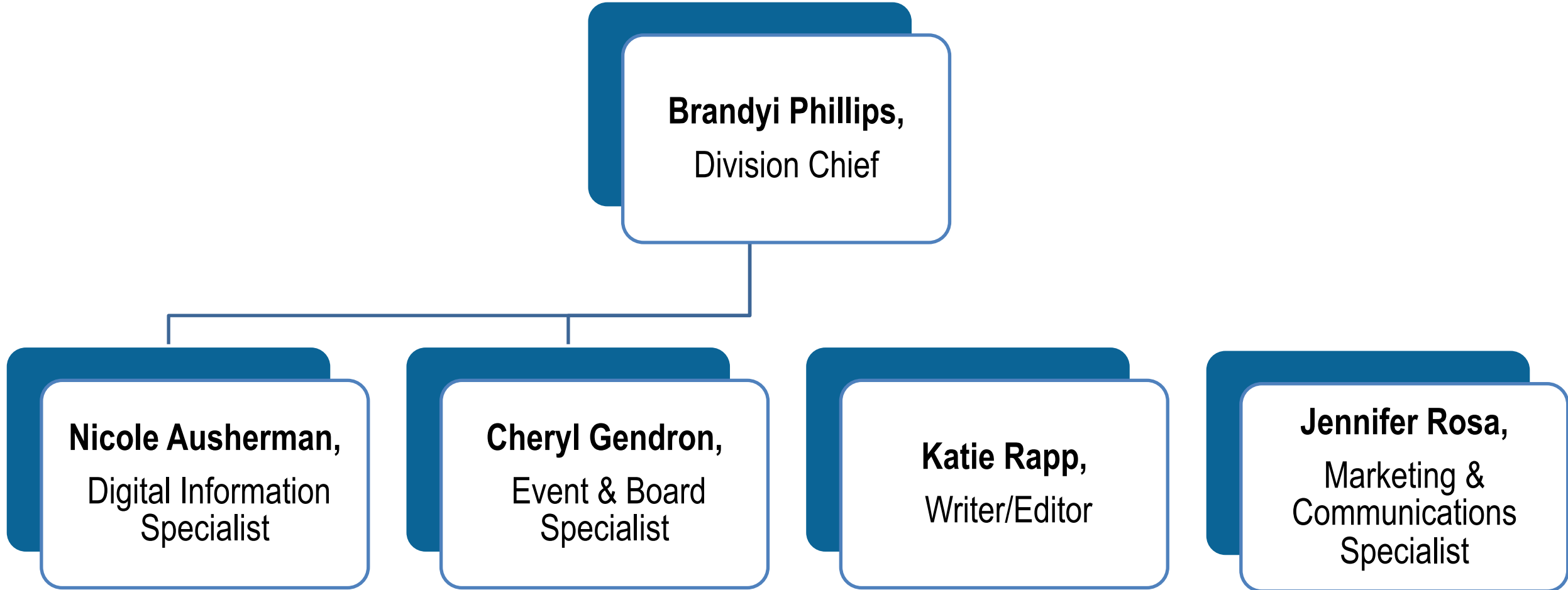


MEP Advisory Board

485: Outreach and External Affairs Division



Outreach and External Affairs – Team Members



Outreach and External Affairs: Division Overview

- **External Events**
 - MEP Advisory Board meetings
 - Conferences
 - Trade shows
- **News and Information**
 - MEP news roundup
 - Network News
 - MEP Manufacturing Innovation Blog
- **Reports and Resources**
 - Annual reports
 - Report submissions to the DOC Secretary & NIST Director
 - NIST MEP Style Guide
- **MEPNN Brand Support**
 - Branding
 - National awareness campaign
- **Marketing Collateral**
 - Infographics and other marketing resources
 - Video
 - Photography
 - White papers, one sheets
- **Digital Channels**
 - Social media
 - NIST MEP public website and MEP Connect migration to the cloud (in progress)
- **Communication**
 - MEP Advisory Board assistance
 - Coordinate with NIST Public Affairs Office & NIST Congressional & Legislative Affairs Office
 - Marketing Community of Practitioners and Marketing Steering Committee
 - Amplify MEPNN achievements, new opportunities and expertise

Marketing and Communication

Marketing Steering Committee

Provides support, guidance and oversight to the Marketing Community of Practitioners. Fosters communication and activities that are critical to the Network.

Marketing Community of Practitioners

Fosters information exchange between MEP Centers. Provides strategic and tactical guidance, and oversight to advance Network communication priorities.

MEP National Network Workforce Programs, Services and Trainings

Manufacturing companies are facing a critical talent shortage and skills gap and the [MEP National Network™](#) is here to support you. The Network consists of MEP Centers located in all 50 states and Puerto Rico, offering a wide range of [workforce development programs and resources](#).

By investing in workforce development and training, you have the opportunity to address these challenges head-on. The MEP National Network understands the importance of remaining competitive in today's rapidly evolving marketplace, and can provide you with a solid foundation for growth through the workforce services offered.

Below you will find a guide to the workforce-related programs offered by MEP Centers in every state and Puerto Rico. Please note that this guide is not exhaustive, so we encourage you to reach out to [your local MEP Center](#) for more detailed information and personalized assistance.

We have a high-performing team, but sometimes we have a challenge, and we don't know exactly how to overcome it. My go-to has been to ask my advisor at Arizona MEP. They enable us to grow more easily and are truly a partner that we can rely on.

— *Trey Pitman, Senior Manager Organizational Development Environmental Safety*
[Read this *Workforce Success Story*](#)

[Alabama](#) | [Alaska](#) | [Arizona](#) | [Arkansas](#) | [California](#) | [Colorado](#) | [Connecticut](#) | [Delaware](#) | [Florida](#) | [Georgia](#) | [Hawaii](#) | [Idaho](#) | [Illinois](#) | [Indiana](#) | [Iowa](#) | [Kansas](#) | [Kentucky](#) | [Louisiana](#) | [Maine](#) | [Maryland](#) | [Massachusetts](#) | [Michigan](#) | [Minnesota](#) | [Mississippi](#) | [Missouri](#) | [Montana](#) | [Nebraska](#) | [Nevada](#) | [New Hampshire](#) | [New Jersey](#) | [New Mexico](#) | [New York](#) | [North Carolina](#) | [North Dakota](#) | [Ohio](#) | [Oklahoma](#) | [Oregon](#) | [Pennsylvania](#) | [Puerto Rico](#) | [Rhode Island](#) | [South Carolina](#) | [South Dakota](#) | [Tennessee](#) | [Texas](#) | [Utah](#) | [Vermont](#) | [Virginia](#) | [Washington](#) | [West Virginia](#) | [Wisconsin](#) | [Wyoming](#)

Workforce Assistance by State

Outreach and External Affairs: Legislative Topics

Supply Chain Optimization and
Intelligence Network
Semiconductors

Retirements and finding
skilled workers

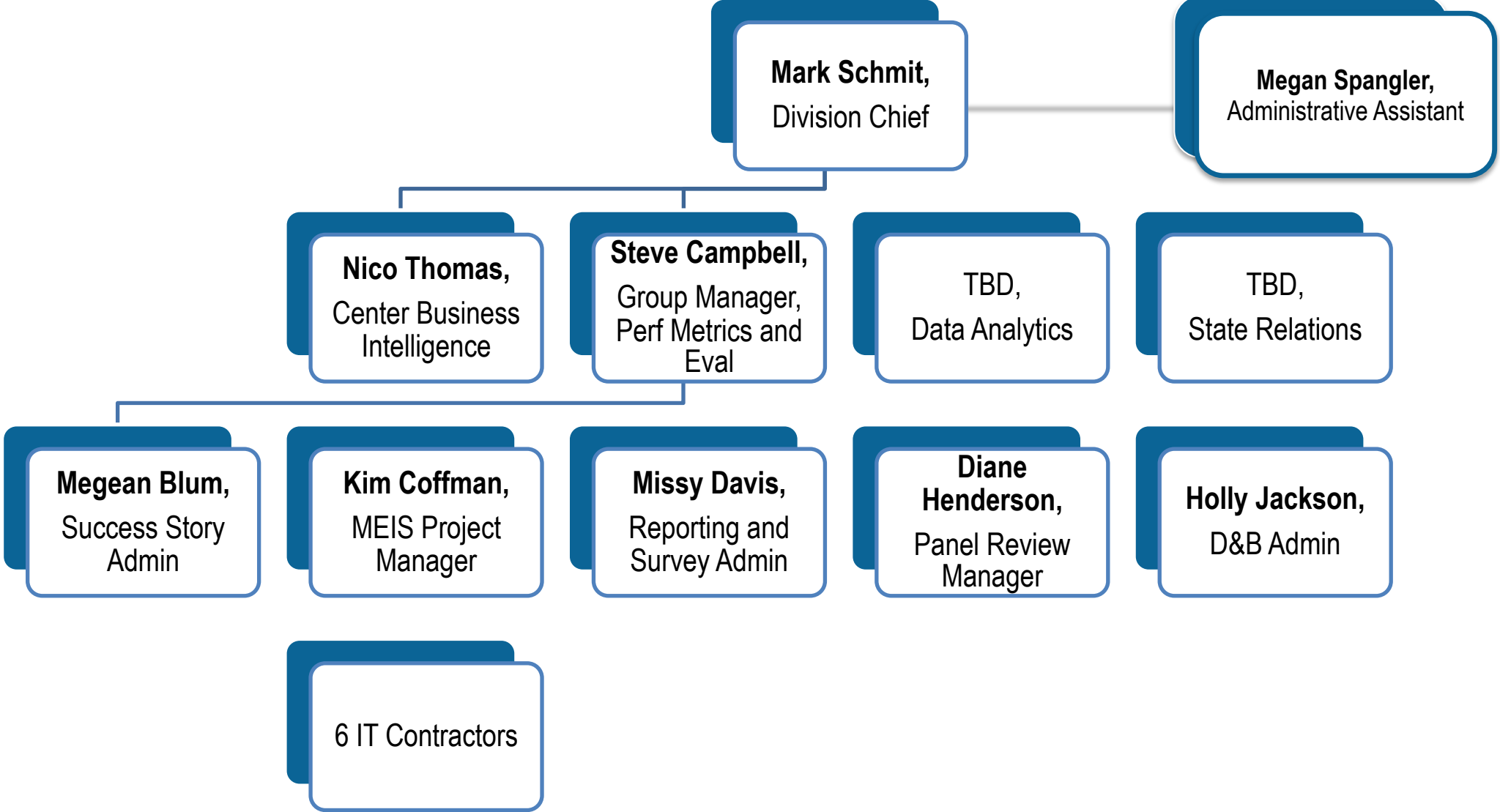
Innovation, automation,
cybersecurity

MEP Advisory Board

482: Performance Evaluation and
Economic Impacts Division



Performance Evaluation and Economic Impacts



Strategic Priorities

1. Evaluate, via various means, the performance of MEPNN as well as the individual Centers
2. Map and define manufacturing ecosystems and identify supply chain gaps
3. Expand MEP's research agenda
4. Integrate MEP into broader state-based economic development
5. Be visible among NIST MEP and the MEP National Network, including the CLT and MAB, and external stakeholders and partners

Data: Measure What Matters

Our division is the key link in **MEP defining, measuring and articulating** our collective successes and opportunities to do better.

The focus on performance has guided MEP since its inception and **demonstrates that it has made a positive impact** on the program and Centers.

The information gathered shows the program makes a **meaningful difference for its clients** and creates **broader economic benefits** beyond positive client outcomes.

Data Collected by MEP

MEP Center Quarterly Reporting

- Center locations
- Center staff
 - Count and names
- Center partners
 - Names and locations
- Center clients
 - Name and location
 - Size (employees)
 - Industry
- Center projects
 - Title and description
 - Type and delivery mode
 - Intensity (hours)
 - Total value (dollars)
 - Internal vs. 3rd party service delivery

Client Impact Survey

- New and retained sales
- Jobs created and retained
- New client investment
- Cost savings
- Client challenges
- Client satisfaction (NPS)
- Client suggestions (narrative)
- Survey response rate
- Percent of manufacturers improving competitiveness

Other Data Sets

- MEP Center success stories
 - Client based
- Progress plans/technical reports
 - Semi-annual reporting
 - Narrative progress reporting
- Operating outcomes
 - Client engagement with very small, rural and start-up manufacturers

Challenges

- NIST MEP only captures a portion of MEP Center client engagements
 - MEP only tells a portion of our story
 - MEP Centers do not get “credit” for some of the work being done
- Not all engagements are surveyable – this creates a NIST MEP made barrier to capturing certain types of engagements
 - Overcoming this is essential as we communicate achievements in workforce, supply chain, and technology
- While we have substantial knowledge, there's room for improvement in integrating all insights to offer diverse solutions

Evolving Toward

What are factors related to differences in Center performance?

Expand the use of case studies and other approaches to examine focus area programs.

Research on underserved segments of the manufacturing marketplace.

Analyzing and aggregating data differently using newer more capable technologies.

More research into the broader economic and business environment faced by manufacturers.

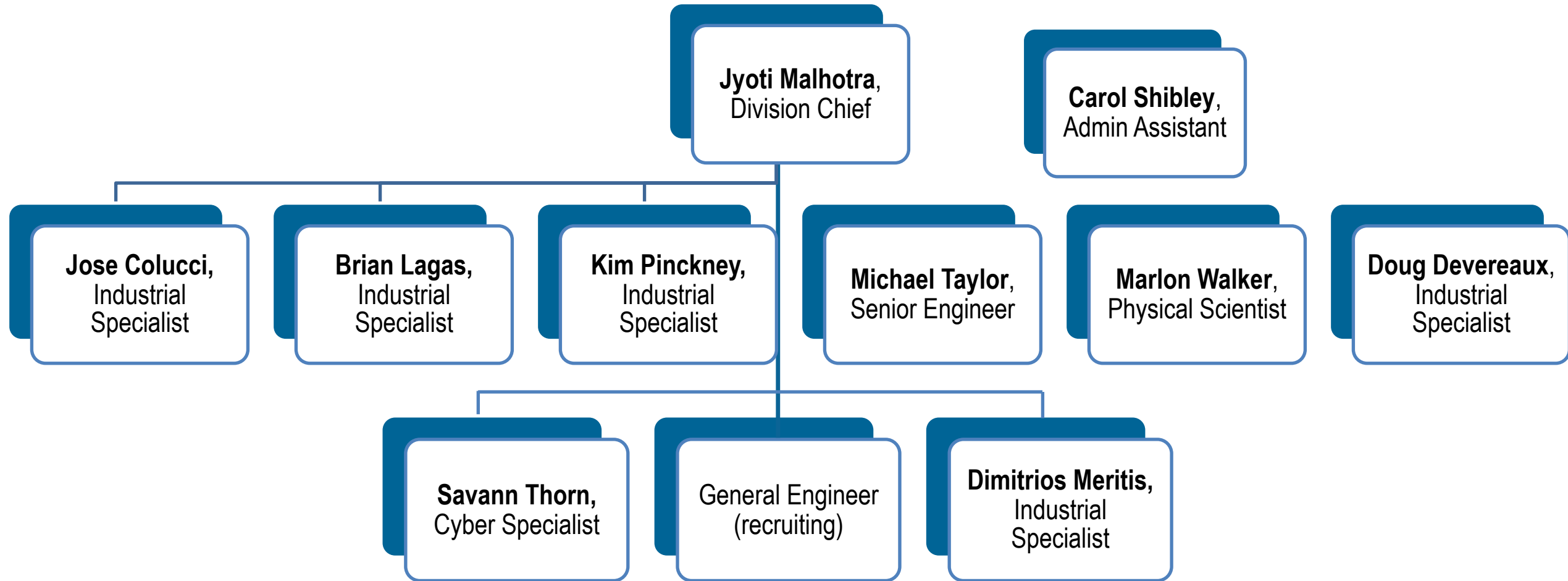
Broaden the bench of researchers focusing on manufacturing (particularly SMMs) and MEP.

MEP Advisory Board

483: National Programs
Division



483 National Programs Division Organizational Chart



National Programs Impacts: Leveraging Technology & Empowering Manufacturers

Food Industry Services

Industry 4.0

MATTR/MATTR+

Cybersecurity

ExporTech

Toyota Kata

**Partnerships and
Collaborations**

OEM Engagements

Targeted Industry Sectors

Food Industry Services

Food community of practitioners' impacts

- In CY 2023 YTD, MEP Centers completed 508 projects with 417 different clients in the food manufacturing industry
- Food manufacturing clients are also reporting strong economic impacts so far in calendar year 2023 as a result of working with MEP Centers

These impacts include:

- \$198,133,457 new and retained sales
- 2,307 jobs created and retained
- \$146,922,610 total client investments
- \$476,444,285 total cost savings

Food community of practitioners' training sessions:

- There were 5 new training workshops offered to the FISCP in 2023

National Programs Impacts

Partnerships/ Collaborations

- **Two new MOUs in the works**
 - MEP-DOT, MEP-APATC
- **One MOU Executed**
 - MEP-MxD
- Expanding MEP-MFG USA partnerships/collaborations and MEP-Baldrige collaborations

Targeted Industry Sectors

- Semiconductor
- Clean energy
- Aerospace sector
- Medical devices
- Biomanufacturing
- Defense

OEM Engagements

- **Semiconductor:** Intel, NXP, Applied Materials & Skywater
- **Medical Devices:** Stryker, Medtronic, Baxter, Edwards Life Sciences
- **Clean Energy:** GE Vernova, GE Aerospace, SAFT America, TotalEnergies
- **Sustainability:** TotalEnergies, SAFT America
- **I4.0/Cyber:** Rockwell
- **Aerospace:** Airbus, GE Aerospace

National Programs Impacts

Industry 4.0

- OLDCC funding opportunity
- I4.0 subgroups formed
- MAT Team expanding from 20 to 24 Centers
- Five AMTS projects completed

Cybersecurity

- Integrating NIST SMEs to cyber community of practitioners
- Launching a contract to expand cyber services across the MEPNN

MATTR/MATTR+

MATTR

- One CRADA (analytical testing) and one RCA (additive) renewal with NIST labs
- Manufacturer's Edge (soil contaminant removal)
- GENEDGE (generic drugs used in the U.S.)
- Missouri Enterprise (1. chemical handling; 2. and calibration lab)
- PRiMEX (corrosion issues with welds)

MATTR+

- Florida-based company (power generating device scale-up)
- Maryland-based company (device encasements and scale-up)
- Massachusetts-based company (polymer additive manufacturing)
- Scale-up/contract manufacturing inquiries from MD, MA, FL, VA companies
- AI in manufacturing inquiry from WI
- Manufacturing inquiry from SC involving fiber production

National Programs Impacts

ExporTech

- MEP Centers completed 18 export-related projects with 18 different clients
- Manufacturing clients served with export-related services are also reporting strong economic impacts so far in calendar year 2023 as a result of working with MEP Centers. These impacts include:
 - \$27,781,400 new and retained sales
 - 78 jobs created and retained
 - \$7,361,120 total client investments
 - \$2,315,000 total cost savings

Toyota Kata FY2023Q1 Average Results

- \$1,475,741 new/retained sales
- \$507,395 total cost savings
- \$409,495 total new client investments
- 12 jobs created or retained

MEP Advisory Board

484: National Platforms
Division



National Platforms Division

Jyoti Malhotra,
Acting Division Chief

Megan Spangler,
Administrative Assistant

Supply Chain Manager,
Recruiting

Ben Vickery,
Group Manager,
Supervisory Industrial
Specialist

Workforce SME,
Recruiting

Samm Webb,
Industrial Specialist
Supply Chain

Robert Barnes,
Supply Chain Staff

Supply Chain Specialist
Recruiting

Adelwiza Lequin,
Network Knowledge
Management Specialist

Mitigating Supply Chain Vulnerabilities Supplier Scouting

Feb.-July 2023

58 opportunities scouted

27 from **three** federal agencies

24 from MEP Centers

7 from private industry

Approx. \$9 million
potential annual business
opportunities

86 unique companies
identified by MEPNN in
response to opportunities

Supply Chain Optimization Focus Group (operational) kick-off on Aug. 1, 2023

Automated Supplier Scouting Process

New Workforce-Focused Partnerships

- **Historically Black Colleges and Universities (HBCUs):** Clark Atlanta, Morgan State University, North Carolina Agricultural Technical State University, Prairie View A&M University, Xavier University of Louisiana
- **Technical and Community Colleges:** Columbus State Community College, Highland College, Ivy Tech, Pasadena City College, Portland Community College, Rio Salado College
- **Four-Year Colleges and Universities:** Arizona State University, Penn State University, SUNY Polytechnic Institute, University of California - Santa Barbara, University of New Mexico
- **Tribal Colleges and Universities:** Dine College, Fond du lac Tribal and Community College, Navajo Technical University, Oglala Lakota College, Salish Kootenai College
- **Other minority-serving institutions:** Interamerican University of Puerto Rico, Polytechnic University of Puerto Rico, University of Puerto Rico – Humacao, University of Texas at El Paso (UTEP) and Texas Rio Grande Valley (UTRGV), University of Turabo

Learning and Knowledge Management System

- Conducting a project in 2023 that will help capture and share knowledge and information with the entire Network more seamlessly and effectively
- The Network Learning and Knowledge Sharing System Roadmap project will develop a clear roadmap and implementation methodologies to guide the development of the future MEP knowledge systems
- The effort will include:
 - Planning and facilitating a current state assessment
 - Developing a report that details the current state of knowledge management
 - Gathering insights to help identify specific capabilities of interest
 - Development of a visually engaging, accessible, and easy-to-understand roadmap
 - Development of detailed, technical requirements needed

Other Offerings to MEPNN

Tab Wilkins Emerging
Leaders Program

Center Director Executive
Program

Center Board
Development

Discussion

2023-2027 MEPNN Strategic Plan

Metrics

Engaging Industries Critical to US Supply Chain

- The Administration's 100-day supply chain report identifies 4 critical industries:
 - Semiconductor manufacturing and advanced packaging
 - Large capacity batteries
 - Critical minerals and materials
 - Pharmaceuticals
- **Goal:** Increase engagement with critical industries to mitigate supply chain vulnerabilities
 - Centers worked with **476 clients** in critical industries in 2022
 - 12-month goal of a **3% increase** would result in **492 clients** engaged
- Note: SCOIN will enable MEP to learn about additional critical industries at regional level

Assessing and Mitigating Business Risk Through Resiliency Planning

- MEP Centers help make manufacturers more resilient
- **Goal:** Mitigate supply chain vulnerabilities by increasing MEPNN's business risk assessment and mitigation projects
 - MEP Centers completed **749 business resiliency** projects in CY22
 - 12-month goal of **3% increase** in projects would set target of **775 projects**

Expanding Workforce Partnerships to Narrow Workforce Gap

There are currently 690 workforce supporting partnerships in MEIS

Goal

Grow the number of partnerships that are workforce-focused

12-month goal of **3%** would result in **21 new partnerships**

Training Manufacturers to Leverage Advanced Manufacturing Technology

- Identified Center reported projects that were related to the following advanced manufacturing practices:
 - Augmented reality/virtual reality
 - Cloud
 - Artificial intelligence
 - Simulation
 - Robots/cobots
- Once advanced manufacturing tech projects identified, then focused search to only include training engagements
- **Goal:** Increase the number of training projects focused on advanced manufacturing technology
 - Increasing projects by **10** (based on CY22 data) would represent a **15% increase**

Awareness and Education on Advanced Manufacturing Technologies to Small Manufacturers (<100 employees)

- Identified Center reported projects that were related to the following advanced manufacturing practices:
 - Augmented reality/virtual reality
 - Cloud
 - Artificial intelligence
 - Simulation
 - Robots/cobots
- MEP Centers completed **172 advanced manufacturing technology** projects with small manufacturers in CY22
- **Goal:** Increase adoption of technology by smaller manufacturers by engaging and exposing more technology to these companies (more projects)
 - 12-month goal of **10% increase** would result in **190 projects** completed

Increasing Cybersecurity Awareness and Adoption Among Manufacturers

- Cybersecurity is critical to the implementation of technology and resiliency of supply chains
- MEP Centers had **709 cybersecurity** related projects in CY22
- **Goal:** Enable manufacturers to safely adopt technology through stronger cybersecurity practices
 - 12-month goal of a **5% increase** would result in target of **745 projects** completed

Metrics Summary

Mitigating Supply Chain Vulnerabilities

- **Goal:** Increase engagement with critical domestic manufacturing industries to mitigate supply chain vulnerabilities.
 - 12-month target of **492 clients** engaged in critical industries represents a **3% increase** from the previous year.
- **Goal:** Mitigate supply chain vulnerabilities by increasing MEPNN's business risk assessment and mitigation projects.
 - 12-month target of **775 resilience projects** completed represents a **3% increase** from the previous year.

Narrowing the Workforce Gap

- **Goal:** Grow the number and depth of partnerships that are workforce-supporting.
 - 12-month target of **711 workforce-supporting partnerships** represents a **3% increase** from the previous year.
- **Goal:** Increase the number of advanced manufacturing training projects delivered across the MEPNN.
 - 12-month target of **75 advanced manufacturing training projects** represents a **15% increase** from the previous year.

Adopting and Leveraging Technology

- **Goal:** Increase advanced manufacturing technology awareness and education engagements (projects) targeted to smaller manufacturers (less than 100 employees) in order to better prepare manufacturers to adopt new technologies.
 - 12-month target of **190 projects** completed represents a **10% increase** from the previous year.
- **Goal:** Increase cybersecurity awareness and adoption projects to make manufacturers more resilient and prepared to adopt new technologies.
 - 12-month target of **745 projects** completed represents a **5% increase** from the previous year.

MEPNN Workforce Panel and Discussion

MEPNN Workforce Panel

- **Pravina Raghavan, MEP Director**
- **MEP Center Directors**
 - **Jeff Spain, Ohio MEP Subrecipient**
 - **Peter Connolly, New Jersey MEP**
 - **Dusty Cruise, Missouri Enterprise, Missouri MEP**
 - **Kathie Mahoney, Massachusetts MEP**
 - **Jessica Herbert, New York MEP**

MEP Advisory Board Meetings - 2024

Planning continues – details coming soon

MEP Advisory Board 2024 Dates

- **Tuesday, March 5 and Wednesday, March 6, 2024**
 - Gaithersburg, MD and Washington, DC
- **Date TBD, June 2024**
 - Virtual
- **Date TBD, September 2024**
 - Location TBD

*Dates are subject to change

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