MEP National Network Cybersecurity for Defense Manufacturing

NDIA Manufacturing Division Meeting
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 MEP National Network

Non-federal assistance Centers located in all 50 US states and Puerto Rico, program managed by NIST

Public-private partnership with local flexibility

Market driven program that creates high value for manufacturers

Leverage partners to maximize service offerings

Federal funds, state investments, private sector fees cover services
- $146M FY20 NIST MEP; matched by MEP Centers

Extension-based program transfers technology and expertise to manufacturers
NATIONAL NETWORK
One Center in Every State and Puerto Rico

Nearly 2,100 Service Providers & Partners

Over 1,400 Manufacturing Experts

Approx. 375 Service Locations
Our Partners

- Federal agencies & laboratories
- State & local government
- Economic development organizations
- Universities, community colleges & technical schools
- Industry leaders & think tanks
- Trade associations & other partners
In FY2019, the MEP National Network connected with 28,213 manufacturers, leading to:

114,650 JOBS  Created or Retained

$15.7 BILLION  in New and Retained Sales

$4.5 BILLION  in Total Investment in U.S. Manufacturing

$1.5 BILLION  in Cost Savings

Numbers are based on survey results from MEP Center clients.
How Centers Work with Manufacturers

**Initial Contact**
Group sessions, referral

**Assessment**
Informal walk-through, detailed company analysis

**Identify**
Find potential issues, define proposed project and approach

**Negotiate**
Consult with company and sign contract with fee paid to Center

**Project Execution**
Center staff, partners, and/or 3rd party consultants

**Follow-Up**
Follow-up by Center to assure customer satisfaction and explore further opportunities

**85 Net Promoter Score**

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Project impact data collected by contractor for NIST approximately 6-12 months after project completion
Client Challenges

The share of MEP clients reporting employee recruitment and retention as a challenge has nearly tripled.

Information based on FY 2019 MEP National Network Client Impact Survey
Development of 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
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.

Source: Symantec

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

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
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

Expanding Capabilities across Network

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

**NOTE:** 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

- 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
    o Collaborating with NIST Labs
    o Also 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

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

Figure 2. CMMC Level Descriptions
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
Questions / Discussion

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