

Manufacturing USA:

10 Years of American Innovation

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CEO

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The Digital Manufacturing & Cybersecurity Institute

MxD strengthens U.S. economic prosperity and national security by driving digital adoption in manufacturing



CONVENE the Ecosystem

ADVANCE Technology Innovation and Adoption

EMPOWER the Workforce

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MxD MEMBER ECOSYSTEM

Tier 1

Abbott
DOW
EY
McKinsey & Company
NORTHROP GRUMMAN
Rolls-Royce
DMG MORI
BOEING
RTX
SIEMENS

Tier 2

DUPONT
LOCKHEED MARTIN
OSHKOSH
software AG
Betacom
Google Cloud
CISCO
cognizant
AT&T Business
TD SYNNEX
uscellular

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The Makeup of the U.S. Manufacturing Industrial Base

239,607 U.S. MANUFACTURING FIRMS



178,210 Small Manufacturers
< 20 Employees

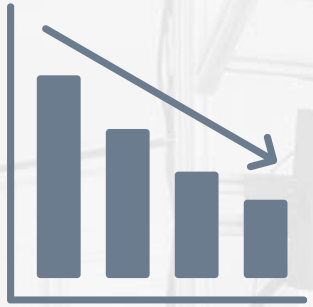
57,373 Medium Manufacturers
20 < Employees < 500

4,024 Large Manufacturers
>500 Employees

Source: https://www2.census.gov/programs-surveys/susb/tables/2021/us_state_6digitnaics_2021.xlsx

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Manufacturing Industrial Base Is Facing Challenges



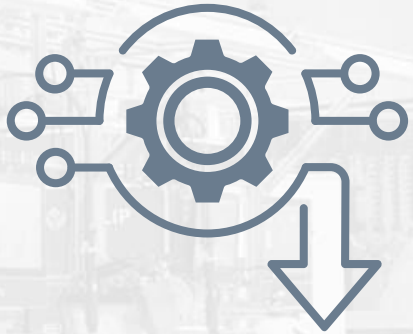
≈20k Lost

11% of the Smallest Manufacturers lost in 10 years



#1 Target

Manufacturing is the **top cybersecurity attacked industry**



2.1M Gap

Unfilled jobs by 2030 due to a skills shortage

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The DoD's Challenges Align with Industry's

DIB is losing small suppliers

"Over the past decade, small businesses in the DIB shrunk by over 40%. …if the DIB continues along the same trend, DoD could lose an additional 15,000 suppliers over the next 10 years."

| Source: https://media.defense.gov/2022/Feb/15/2002939087/-1/-1/1/STATE-OF-COMPETITION-WITHIN-THE-DEFENSE-INDUSTRIAL-BASE.PDF/ SOURCE

Need to modernize

"The organic industrial base was designed and really implemented in World War II, and so what we have is really a 20th century capability to support a 21st century Army and joint force."

General Edward Daly, AMC

| Source: https://www.ausa.org/news/%E2%80%98holistic%E2%80%99-transformation-underway-organic-industrial-base



10 YEAR ANNIVERSARY
CONVENING. ADVANCING. EMPOWERING.
EST. 2014

PUBLIC + PRIVATE FUNDING
$415M

PROJECTS
194

LEARNERS ENGAGED
250K +

650
Members
Over 10 years

12K
visitors
annually

"MxD, a beacon of progress in equipping US factories with the digital tools, cybersecurity measures, and workforce expertise that is necessary in the modern era"

***Ms. Heidi Shyu*, Under Secretary of Defense for Research and Engineering**

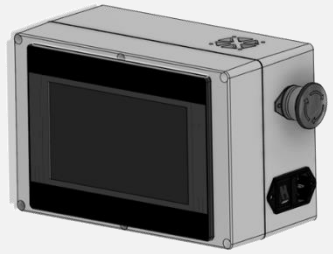
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MxD Sensor Kit



Challenge

- Legacy equipment can still be highly productive
- Digitalization is a challenge for small and medium-sized manufacturers (SMMs), the DIB and OIB



Low-cost Solution

- Going digital doesn’t have to be challenging or expensive
- Gain real-time equipment data to inform and improve manufacturing operations



Partnerships

- Mutual mission and value to support SMMs
- Partnerships include MEP, Regional Econ Dev Partners, Academics

National Center For Cybersecurity In Manufacturing

Securing America's Supply Chain



Awareness Building and Training



Cybersecurity Tools and Services



Cybersecurity Workforce Programs



Support Standards Compliance

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MxD can understand the constraints that suppliers are under, especially small and medium sized manufacturers. MxD can provide tools, training, and guidance to help this population of suppliers. ***And ultimately, through the help of MxD, Rolls-Royce is able to reduce the cybersecurity risk within our supply chain.***

Neil Brink
Cybersecurity Specialist
Rolls-Royce

Cyber Supplier Readiness Program

Project Summary

Delivering awareness and educational content to prepare supply chain for cybersecurity compliance and overall preparedness.

- Newsletters
- Webinars
- Playbooks
- Hands-on Workshops
- Cyber Assessments

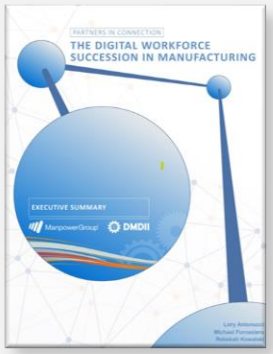
Impact

- Reached 20,000+ suppliers monthly
- Engagement through content and surveys to measure baseline
- Webinar participation: Incident Response 200+ registered

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DEFINE

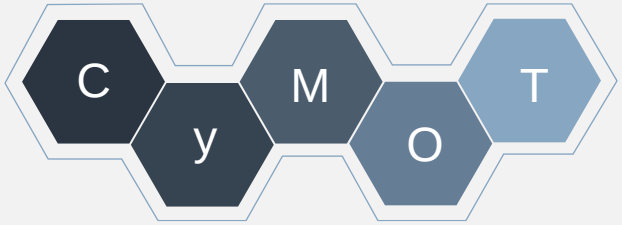
Identify the Future of Work





DEVELOP

Create the Training Opportunities



DO

Provide Access to Hands-on Learning



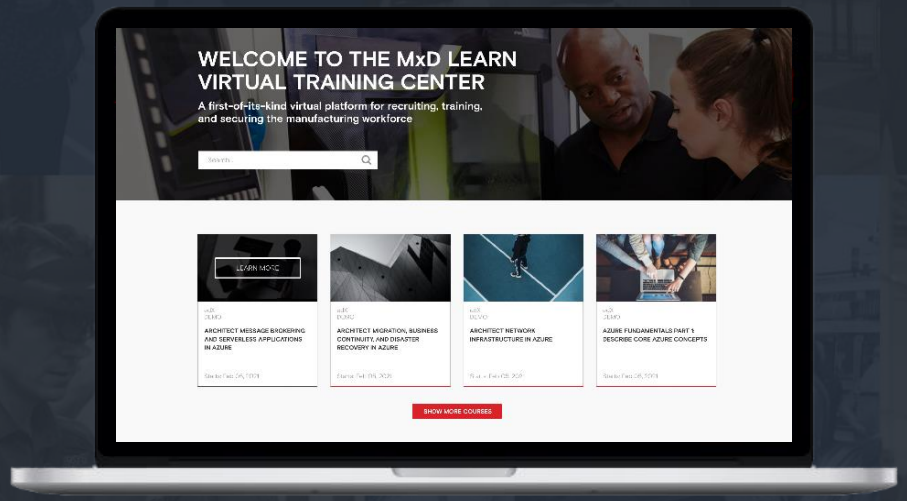
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MxD Learn

MxD 10 YEAR ANNIVERSARY
EST. 2014
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MxD Learn CAPITAL

(Curriculum and Pathways Integrating Technology and Learning)



https://vtc.mxdusa.org



MxD Learn, in partnership with the College of Lake County, is excited to offer manufacturing education and training to adults (age 18+) with disabilities. Manufacturing is a fast-growing industry offering competitive wages and benefits. Earn a certificate while getting paid and prepared for careers and advancement in manufacturing.

MxD Learn

College of Lake County

Manufacturing Training & Job Program for Adults with Disabilities

LEARN & EARN

Students can choose between two certificate programs: **Mechanical Maintenance Technology Certificate** (14 credits) or **General Welding Certificate** (9 credits) both of which can be completed across two semesters (by May 2024).

- **NO COST** – Tuition, fees, and learning materials are all covered!
- $1000 living stipend each semester
- Day and evening classes and hybrid learning options for select courses
- Certificate upon completion of coursework which can build toward stackable credentials or Associate's Degree
- Support from College of Lake County Access and Disability Resource Center

Courses begin the week of August 21st.

MxD Investment in OIB









Assess → **Pilot** → **Deploy**

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Success in 2028 – Impact at Scale!



Digitalized and Secured 10,000 Manufacturers



Upskilled 1,000,000 Manufacturing Workers



Modern and Resilient Organic Industrial Base

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