THE OHIO TECHNET DEFENSE INDUSTRIAL BASE STEM CONSORTIUM

Executive Summary & Progress Update

SUPPORTED BY AN AWARD FROM:

Office of the Undersecretary of War (Research & Engineering) – DoW STEM
National Defense Education Program (NDEP) – Congressional Add-on Funds
Regional Community College Consortium (RC3)

AWARD INFORMATION

Base Award: $4,999,955
1 September 2022 – 31 August 2026

Option Year 1 Under Contract: $1,500,000
1 September 2026 – 31 August 2027

Three possible one-year option periods, contingent on Congressional funding and project performance

Total Potential Amount of Federal Award with 3 Option Periods: $10,999,500

OhioTechNet

Ohio Training Partners

Lorain County Community College
SINCLAIR COMMUNITY COLLEGE
Cincinnati State
Cleveland State University 1964
COLUMBUS STATE COMMUNITY COLLEGE
CLARK STATE
Cuyahoga Community College
HOCKING COLLEGE
MIAMI UNIVERSITY
THE OHIO STATE UNIVERSITY
OHIO UNIVERSITY
RHODES STATE COLLEGE
Shawnee State University
Stark State College
ZANE STATE COLLEGE ZSC
WASHINGTON STATE COLLEGE OF OHIO

National Replication Partners

CENTRAL GEORGIA cgtc TECHNICAL COLLEGE
wsu TECH

Strategic Partners

The Ohio Manufacturers' Association
NEXTFLEX America's Flexible Hybrid Electronics Manufacturing Institute
ARM ADVANCED ROBOTICS FOR MANUFACTURING
America Makes
NCATC
NewGrowth
MANUFACTURING WORKS
MAGNET

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Inspiring, Cultivating, and Developing Talent to Address the Nation's Technical Challenges

The Ohio TechNet Defense Industrial Base STEM Consortium leverages the Ohio Technical Skills Innovation Network's (Ohio TechNet, OTN) collaborative network to accelerate and scale innovation, supporting the Department of War's mission to build a robust and sustainable defense manufacturing STEM and technician workforce, and aligning programs to defense-critical technologies and technical occupations. Lorain County Community College (Elyria, Ohio) and Sinclair College (Dayton, Ohio) co-lead a consortium of 13 OTN member colleges and universities and numerous strategic partners, including the Ohio Manufacturer's Association, and several Manufacturing USA Innovation Institutes.

Ohio-Wide Impact To-Date

Engaging New Talent: Partnership with Manufacturing USA Institute NextFlex

- Since 2018, OTN partners have served **more than 11,000 Ohio youth** with engaging, hands-on exposure to advanced manufacturing, local industry, and related educational pathways via the FlexFactor program
- **572 iterations** of FlexFactor delivered at **120** Ohio middle and high schools, camps, and community programs, with **110 employers and stakeholders** engaged via industry visits and Final Pitch panels
- Regional Community College Consortium investment supports additional youth engagement in manufacturing pathways including high school dual-enrollment, industry certifications, and paid work-based learning

Preparing the Future-Ready Workforce: Industry 4.0 Training & Education

- **Over 90 industry partners** engaged in curriculum design and advising, student outreach, hosting work-based learning experiences, smart manufacturing technology road mapping, and incumbent worker training
- **Over 300 students and incumbents** have received training in Automation & Robotics, Digital Transformation, and other advanced manufacturing technologies
- Students earned **more than 330** industry-recognized credentials in robotics, programmable logic controls, soldering, and industrial pneumatics and hydraulics

Automation and Robotics – Lorain County Community College

- **48 Ohio high school, career tech, and post-secondary faculty** trained and credentialed in Automation & Robotics
- **200+ students** statewide received instruction in I4.0 A&R from LCCC-trained instructors
- **15 manufacturers** engaged in talent planning and Industry 4.0 road mapping and technical assistance
- **Automation Engineering Technology** pathway redesign, from Fast Track Certificate through Bachelor of Applied Science. **Enrollment expanded 78% over 2 years.**
- Steele High School (Amherst, OH) has grown its robotics and manufacturing program to **88 students** in 2025
- **$13.2 Million of known investments** in Automation & Robotics educational equipment, capacity, and facilities to secondary schools with instructors trained in LCCC I4.0 Automation & Robotics Teacher Training.

Digital Thread and Digital Transformation – Sinclair Community College

- **Digital Transformation** curriculum is being utilized in 14 southwest Ohio K-12 classrooms
- **52 faculty** trained in the use of Digital Transformation curriculum, implementing content in **15+ high schools**
- **41 Wright Brothers Institute Summer of Innovation interns** completed Digital Transformation curriculum and FlexFactor in 2024 and 2025, in partnership with Midwest Microelectronics Consortium and UDRI FastLane
- **Short-Term Technical Certificate in Digital Thread Engineering Technology** developed by Sinclair (supported by Air Force Prime Contract No. F48650-16-D-5524, MITS Task Order J: Regional Fabrication and Certification Training Labs)

OTN DIB STEM Replication, Innovation, and Customization of Industry 4.0 Curricula

- **$350,000** invested in Automation & Robotics and Digital Transformation curriculum replication and innovation at partner institutions in base performance period. **$525,000** in new awards in Option Year 1 for innovative workforce training, faculty development, guided youth pathways, and educational innovation.
- **Ohio University** – Developed curriculum in digital engineering for deployment through 3DExperience platform, with content tailored to different learning levels including K-12, in partnership with Educational Services Centers
- **Miami University** – Redesigned tiered robotics pathway with flexible options for students and incumbent workers to earn micro-credentials, certifications, 2-year, and 4-year degrees aligned to technician and engineering careers.
- **Cleveland State University** – Piloted a non-credit Digital Transformation industry training course incorporating Sinclair DTx curriculum modules and industry training content with industry and academic representatives, utilizing CSU Transdigm Advanced Manufacturing Center.
- **Central Georgia Technical College** has delivered AI & Robotics courses to **over 150** students, including civilian personnel from Warner Robins Air Logistics Complex, and developed an AI-Enhanced Robotic Manufacturing Specialist certificate program.

Ohio TechNet partners drive innovative strategies to recruit new talent into manufacturing STEM pathways, increase enrollment and student success, and create sustainable models to support the DoW STEM mission

Marion L. Steele HS - Amherst, OH

Instructor completed Industry 4.0 Automation & Robotics Teacher Training program with grant support in 2023

Amherst launched its Advanced Manufacturing program in Spring '24 with **14 students,** utilizing robotics equipment lent by LCCC. Later that year the school won a $1.6M grant from the Ohio Department of Education and Workforce to purchase robotics, automation, and mechatronics equipment

In Fall 2025 the program enrolled **88 students** in traditional and dual-enrollment courses, earning up to 9 industry credentials, high school graduation points, and college credit

Pre-apprenticeships and Earn & Learn opportunities are being developed through deep industry partnerships.

The Ohio Manufacturing Workforce Blueprint is a statewide strategy to align, grow and strengthen Ohio's manufacturing workforce, led by the Ohio Manufacturers' Association's (OMA's) Workforce Leadership Committee and the Governor's Office of Workforce Transformation, in partnership with Ohio TechNet, JobsOhio, and key state agencies. Developed by manufacturing leaders and workforce experts, the Blueprint provides a practical, actionable framework to:

- Coordinate education, training and workforce efforts statewide
- Expand talent pipelines and broaden access to manufacturing careers
- Ensure training programs are aligned with industry-defined skill needs
- Support current and emerging industries with qualified talent

NDEP RC3 funding has been instrumental to Ohio TechNet's ability to engage with and support this transformational statewide effort.