The Center to Advance Manufacturing Monthly News

April 2026

Earlier this month, Center staff traveled to Charlotte, North Carolina to attend MD&M South and The Battery Show, an expansive event bringing together advanced manufacturing, automation, EV technology, and energy storage under one roof.

With a strong lineup of speakers and sessions spanning multiple sectors, the event provided valuable insight into how rapidly manufacturing continues to evolve and the growing importance of aligning technology, workforce, and operations to remain competitive.

One of the most consistent themes throughout the conference was the shift from exploration to execution when it comes to advanced technologies. Artificial intelligence, in particular, is no longer a future concept. It is actively being applied on the shop floor to support frontline workers, streamline processes, and capture institutional knowledge.

At the same time, a recurring message across sessions was that technology alone is not the solution. Successful implementation continues to be the biggest challenge. Organizations that see results are those that take a more intentional approach by clearly defining outcomes, aligning teams, and focusing on people and process alongside the technology itself.

Additional discussions highlighted emerging considerations around EV and battery technologies, including safety, infrastructure, and evolving workforce skill needs. As adoption increases, manufacturers must plan not only for new technologies, but also for how those technologies impact operations, training, and long-term strategy.

While the event brought together professionals from across the country, one of the most notable takeaways was how closely the national conversation aligns with what we are seeing in Northwest Ohio. The same themes, including workforce challenges, the need to better integrate technology, and the difficulty of moving from pilot to full implementation, are not unique to one region. They are shared across the industry.

That alignment reinforces the importance of the work happening here locally. Manufacturers in Northwest Ohio are not behind. They are navigating the same challenges, asking the same questions, and working toward the same solutions as companies across the country.

The conference also offered a meaningful connection back to Northwest Ohio. One of the keynote speakers, Logan McKnight *(pictured right)*, is a Bowling Green State University alum from the Toledo area. Her perspective on technology implementation, particularly within the med-tech space, highlighted the broader reach and impact of BGSU graduates across industries.

Staying connected to conversations beyond our region remains important, not because the challenges are different, but because it provides validation, perspective, and new approaches to solving shared challenges. Together, these insights reinforce the importance of staying aligned with industry and the realities manufacturers are navigating today.

Owens Community College Expands Welding and Material Science Training Capacity

The Center recently supported equipment investments at Owens Community College to strengthen hands-on training opportunities in welding, material science, and advanced manufacturing. New welding units and material testing equipment are helping Owens expand lab capacity, modernize instruction, and prepare students for careers in high-demand skilled trades fields.

Expanding Welding Lab Capacity and Student Experience

Owens added five new welding units, allowing more students to work simultaneously during lab sessions. The additional units reduce wait times and increase the amount of hands-on practice each student receives, which is essential for building technical proficiency and muscle memory.

The new equipment also reflects the technology students are likely to encounter in today's workplaces, giving them experience with more modern welding tools and processes before entering the workforce.

Building a New Material Science Lab

In addition to welding equipment, the Center invested in a Tension/Compression Testing Machine, Mounting Press, and Metallurgical Microscope. These pieces serve as the foundation of a new material science lab that will support both credit-bearing courses and workforce training programs.

The lab creates opportunities for students to move beyond basic applications and into higher-level material analysis, testing, and engineering support. Students will be able to examine material properties, analyze strength and performance, and better understand how manufacturing materials behave under real-world conditions.

Preparing Students for Careers and Certifications

By training with industry-standard equipment, Owens students gain confidence using the same types of tools they will encounter on the job. The investment helps align curriculum with modern manufacturing standards and supports the College's goal of preparing graduates to be workforce-ready from day one.

The equipment also strengthens Owens' certification pathways. Students can use the welding units to prepare for American Welding Society national certifications, while incumbent workers can benefit from specialized training in welding processes and material analysis.

"This investment through the Center to Advance Manufacturing grant significantly elevates our training capabilities," said Baqer Aljabr, Assistant Dean of Advanced Manufacturing and Skilled Trades in the School of Science, Technology, Engineering and Math at Owens Community College. "By integrating modern welding technology and material science analysis into our labs, we aren't just teaching a trade; we are empowering the next generation of professionals to meet the high-tech demands of the manufacturing industry."

Northwest Ohio Partners Advance Food Production and Supply Chain Collaboration

The University of Findlay recently hosted a regional meeting focused on strengthening food production and distribution systems across Northwest Ohio. The discussion brought together partners from education, industry, and community organizations to explore how existing agricultural infrastructure can be better aligned with regional supply chain needs.

The meeting was led by Justin Richardson, Instructor of Teaching and College Credit Plus Liaison in Environmental Safety & Occupational Health at the University of Findlay, who leveraged his background in K–12 education and sustainable agriculture to convene partners across the region.

Participants included leaders from CropKing, the West Ohio Food Bank, Rhodes State College, Bluffton University, and the University of Findlay, along with regional K–12 partners such as Lima City Schools, Findlay City Schools, Cory-Rawson Local Schools, and Arlington Local Schools.

The group identified opportunities to scale production through school-based agriculture programs and controlled environment systems, while strengthening connections to food distribution networks. These efforts highlight the intersection of food production, logistics, and workforce development, with potential applications in system design, supply chain coordination, and regional manufacturing support.

This emerging "Northwest Ohio Food Hub" model reflects a broader systems-based approach, integrating production, education, and distribution, to address both workforce development and regional supply chain resilience. Next steps include site visits and the development of pilot locations aimed at increasing local production capacity and improving access to fresh food across the region.

For more information or to get involved, please contact:
Tommie Harner, CEO of the West Ohio Food Bank at tommie@wofb.org or Justin Richardson at richardsonj@findlay.edu.

Summer Camp Opportunities in Advanced Manufacturing & STEM

This summer, Bowling Green State University and Owens Community College, in partnership with the Northwest Ohio Innovation Consortium (NOIC), are offering a variety of hands-on camps designed to introduce students to advanced manufacturing and STEM-related careers.

BGSU's Advanced Manufacturing camp provides high school students with an immersive, week-long experience exploring robotics, electronics, 3D printing, and glass manufacturing through hands-on workshops and real-world applications. Owens Community College offers a broad lineup of camps across multiple age groups, including topics such as robotics, coding, microcontrollers, AI, and glass-related programming that highlights the region's manufacturing strengths. New this year, Owens is also expanding programming to its Findlay campus, increasing access to these opportunities across the region.

With support from NOIC, many of these camps are offered at a reduced cost or with scholarship opportunities, helping expand access and early exposure to in-demand career pathways.

To learn more and register:

BGSU Camps: bgsu.edu/AdvancedManufacturing Owens Camps: owens.edu/camps

Building the Future Workforce: The Owens Community College Earn-and-Learn Program

The industrial and manufacturing landscape of Northwest Ohio is currently at a critical turning point. For decades, our region has served as the backbone of American production, but the traditional methods of hiring and training are no longer sufficient to meet the demands of modern industry. We are currently navigating a "perfect storm" in the local labor market: a massive wave of retirements from a highly skilled incumbent workforce, coupled with a rapid technological shift toward automation, advanced robotics, and complex electromechanical systems.

Local employers are no longer just looking for "hands" to work a production line; they are looking for "brains" that can maintain, troubleshoot, and program the future of the shop floor. However, the traditional educational path often creates a significant barrier for the very people best suited for these roles. Many of our most talented potential technicians cannot afford to stop working for two years to earn a degree, and many employers cannot afford to wait two years for a student to graduate before they start contributing to the bottom line.

This is exactly why the School of STEM at Owens Community College has launched the Earn-and-Learn Program. This initiative is a strategic workforce development engine designed specifically to cultivate the exact caliber of technician our local economy requires, exactly when employers need them most. We aren't just trying to fill seats in a classroom; we are engineering a pipeline of elite technicians who are work-ready from day one.

The Model: Blending Classroom Theory with Floor Experience

The core philosophy of the Earn-and-Learn program is simple but highly effective: students shouldn't have to wait until graduation to apply what they are learning. To achieve this, we have developed a structured "Work-Study" model that treats the classroom and the factory floor as a single, unified learning environment.

In this program, students are not just "working a part-time job" while they go to school. Instead, they are placed with partner employers in roles that directly mirror their academic curriculum. Typically, a student's week is split: two days are spent in intensive, hands-on labs at the Owens Dana Center, and three days are spent on-site with their employer. This creates a powerful, immediate feedback loop. If a student learns about motor controls, fluid power, or programmable logic controllers (PLCs) on a Tuesday morning, they are seeing those exact systems in a real-world application by Wednesday afternoon.

This model completely removes the "experience gap" that so often plagues traditional graduates. By the time an Earn-and-Learn student receives their degree, they already have two years of seniority and technical experience with their employer. They don't just know the theory behind a repair; they know the specific machines, the safety protocols, and the unique culture of the company they are working for.

Incentivizing Progress: The Milestone Advantage

We recognize that the students who thrive in this program are balancing immense responsibilities. Juggling a rigorous STEM curriculum with a consistent work schedule requires a high level of discipline and commitment. To support these students, we have moved away from traditional financial aid models in favor of a milestone-based incentive structure.

These incentives are highly advantageous to students because they are designed to support every stage of their professional development. Rather than receiving a lump sum of support at the beginning of the semester, students unlock specific funding by reaching academic and career readiness benchmarks. This journey begins with foundational professional prep—like resume development and mock interviews—and continues through the successful completion of challenging "barrier" courses that are often the biggest hurdles to graduation.

By rewarding students for their active participation, academic persistence, and reflection on their own work-based learning, we are doing more than just providing financial relief. We are building a culture of professional achievement that rewards the traits our industry partners value most: reliability, preparation, and continuous improvement. For the student, it provides a tangible reward for their hard work. For the program, it ensures that resources are directly supporting the students most dedicated to becoming the next generation of technical leaders.

Success Coaching: The Human Element of Retention

As the Success Coach for this program, I see firsthand that technical skill is only one half of the success equation. For a student to thrive in a demanding "work-study" environment, they need a dedicated support system that understands their specific challenges. My role is to act as the bridge between the student, the faculty, and the employer. We know that life doesn't stop just because a student is enrolled in a program. Real-world hurdles—such as navigating childcare, managing transportation, or simply learning how to balance a professional schedule with academic deadlines—can easily derail a student's progress. By providing a single point of contact for these students, we can provide proactive interventions.

Whether it's helping a student navigate their Fall 2026 course scheduling or coordinating with an employer supervisor to ensure a student is getting the right kind of mentorship on the shop floor, the goal is to remove every possible barrier to completion. We aren't just hoping our students pass their classes; we are actively coaching them toward a sustainable, high-wage career path.

Maximizing Employer ROI and Cultivating Loyalty

For our corporate partners, the Earn-and-Learn program is a high-yield investment with immediate returns. We strongly encourage our partners to leverage their existing tuition reimbursement policies as a primary recruitment asset. When an employer's tuition assistance is combined with the wages earned during the work week and our program's milestone incentives, participants have an incredible opportunity: graduating with a technical degree completely debtfree.

From a business perspective, the ROI is clear. Recruiting a "ready-made" technician from the open market is an expensive and often risky endeavor. By participating in Earn-and-Learn, companies are "growing their own" talent. You are cultivating a technician who has been molded to your specific operational standards and trained on your specific equipment long before they officially receive their diploma. This level of integration leads to significantly higher retention rates and a much more loyal, dedicated workforce.

Partner With Us

We are actively recruiting for our upcoming cohorts and formalizing our strategic employer partnerships. The Owens School of STEM is committed to being the premier workforce partner for Northwest Ohio, and we invite local industry leaders to join us in this effort.

If your organization is ready to stop fighting over the same small pool of available technicians and start proactively engineering your own elite workforce, we invite you to collaborate with us.

To learn more about the program or to schedule a discovery call and facility tour, please contact:

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Regional BAC Leaders Convene to Strengthen Workforce Connections

The Center recently hosted leaders from Business Advisory Councils (BACs) across Northwest Ohio for a regional discussion focused on sharing ideas, challenges, best practices, and opportunities for collaboration. The conversation covered a wide range of topics, including employer engagement, educator boot camps, student career exploration, work-based learning, YouScience data, internship models, durable skills, funding opportunities, and strategies for connecting students to in-demand careers.

A consistent theme throughout the discussion was the value of bringing councils together regionally to learn from one another and strengthen the connection between education and workforce needs. The conversation reinforced the importance of collaboration across Northwest Ohio, and we appreciate the perspectives shared by all who participated.

Connecting Employers to TechCred Resources in Allen County

In partnership with the Allen Economic Development Group, the Center recently hosted a TechCred workshop in Allen County.

The session provided employers with a comprehensive overview of Ohio's TechCred program, including requirements, how to select credentials and training providers, application timelines, documentation needs, and strategies to avoid common challenges throughout the process.

Thank you to everyone who attended and engaged throughout the session, and to the Allen Economic Development Group for their partnership. Opportunities like this allow us to connect directly with employers and support a better understanding of the resources available to advance workforce training and upskilling efforts across the region.

Design Day at Bowling Green State University

Design Day at Bowling Green State University's College of Engineering and Innovation provided a strong look at the depth of talent and innovation developing on campus. The event showcased a wide range of student capstone projects, highlighting how classroom learning is being applied to real-world challenges across engineering and the built environment.

Several of the projects were developed in collaboration with industry partners, giving students the opportunity to work on real operational challenges and contribute solutions that are now moving toward implementation.

Experiences like these demonstrate the value of connecting students with industry in meaningful ways and strengthen both workforce readiness and the pipeline of talent entering advanced manufacturing and related fields.

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