

MACOMB COUNTY

Manufacturing in county is on a roll



Chester Wozniak, right, poses with Jesse Siress, who was his fabrication teacher at the Center for Manufacturing, Automation and Design Engineering. Wozniak graduated high school in 2023 and is now working in the manufacturing industry. PHOTOS BY GINA JOSEPH — THE MACOMB DAILY



Going over the steps involved in CNC programming are Chester Wozniak, left, and Eric Doyle, Wozniak's manager at RCO Engineering.

BY GINA JOSEPH

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There's a reason the National Association of Manufacturers CEO and President chose to deliver his State of Manufacturing from RCO Engineering in Roseville.

Macomb County is on a roll.

Not only in terms of manufacturers expanding or moving into the area but also in its growing ability to provide companies with the talent needed for America's Fourth Industrial Revolution.

"Every year, we travel the country to deliver the NAM's State of Manufacturing Address," Jay Timmons said, in his address. "We reflect on everything manufacturers are accomplishing, all the good we're doing for the world and how we're driving the American company forward."

Timmons pointed out that manufacturing represents more than 10% of the United States economy and 16% of Michigan's economy and yet its impact on the country and on the world is incalculable.

'Resilience, adaptability, constantly refining and strengthening the commitment to the communities you serve — that's why manufacturers in the U.S. are the best in the business,' he said.

Applauding Timmons decision to celebrate the event in the county was Macomb County Executive Mark Hackel.

"Of the more than 600,000 manufacturing companies across the U.S., the National Association of Manufacturers chose to celebrate the annual State of Manufacturing right here in Macomb County," Hackel said, in a press release. "The address championed the unrivaled achievements of our 1,600 manufacturers in Macomb, and illustrated how manufacturing is the heartbeat of our economy. In Macomb County, we remain committed to working with our economic development and educational partners to ensure that manufacturing continues to thrive.

"I am incredibly optimistic about the future of manufacturing. Not just here in Macomb County, but across the country, because from concept to consumer, no one does it better than how we do it right here in America."

Chester Wozniak of Sterling Heights was not at the NAM event.

But he works at RCO Engineering and represents the young talent that's being developed through a series of initiatives created to address the growing needs of Macomb County's manufacturers.

Talent pipeline

Vicky Rowinski, director of Macomb County planning and economic development (MCPED) said her office became committed to finding opportunities to help our manufacturers fill in the workforce gap, more than seven years ago.

"We strategically stood up our Fueling the Talent Pipeline initiative," Rowinski said. "This model program connects employers with educators to provide meaningful career exploration activities for students and to prepare the next generation of our workforce for the interesting and well-paying jobs offered by local companies."

Their approach is collaborative and community-driven.

"We meet with area employers to understand their workforce challenges and then partner them with schools that offer related career training," Rowinski said. "Through these

partnerships, students gain greater insight as to how their interests and abilities, combined with the appropriate credentials, lead to rewarding careers.”

As a middle school student, Wozniak thought he might like working at a car dealership, which would also help to facilitate his desire to own a Ford Mustang.

“That was my small-minded dream,” said the Sterling Heights resident and member of the second graduating class for Stevenson Manufacturing, Automation and Design Engineering (MADE) academy.

Once he left middle school that all changed.

“Engineering was one of the things I always liked to do,” said Wozniak, who enrolled in MADE as a freshman, unsure about what to expect and no idea what kind of engineering he wanted to do. He also knew it was kind of a gamble, choosing to jump right in at an academy, but he was anxious to put middle school and all of its drama behind him.

His decision paid off.

“The first day I walked into the school, I knew this is where I wanted to be,” Wozniak said, remembering how good he felt seeing new people, with similar passions and how the teacher treated everyone like adults.

“I just felt at home,” Wozniak said.

Then he paused and smiled.

“I was also anxious to get my hands on the robots,” he said, of the equipment that’s provided for the students, who learn a variety of trade skills during their four years in the academy.

Among the tasks that Wozniak enjoyed during his time at MADE was the class project that he and his team of fabricators including Ali Mohammad, Allen Vaso and Brenden Storms created in their senior year.

“This is similar to what we made,” Wozniak said, of an air motor sitting in a classroom. As Wozniak learned from his instructor, what was important about the project was not what they were making but how they did it. “The idea is to showcase your skills and that you know how to make it.”

The goal inside the classrooms is to make sure jobs are filled.

“The program began in response to jobs reports and employment outlooks that showed how many manufacturing jobs were going to need to be filled in our area. We had courses in these areas but not in such an in-depth and coordinated manner, working with business

partners and post-secondary institutions as we do now,” said Alison Hildebrand, Stevenson High School Principal and MADE Administrator.

“The workforce was aging, and not enough young people were there to fill the jobs in both engineering and skilled trades,” Hildebrand said, of their decision to create the academy in 2019.

Since then, enrollment has increased to the point where the school is now reaching its capacity and having to create a waiting list. Of the 140 students who have graduated many have either entered the workforce or go on to attend universities in order to further their careers in a particular field.

Wozniak is a member of the class of 2023 and currently working as a machinist for RCO Engineering. The company, which celebrated its 50th anniversary last year, creates the seats for Gulfstream jets among other precision parts for the aerospace, automotive, and defense industries.

“This is one piece of the puzzle,” Eric Doyle said, of a part that Wozniak was working on during a tour of the shop. Doyle, who is Wozniak’s supervisor, then proceeded to show Wozniak how to program another machine to make the part, which is what he hopes to do more of in the future.

“Skilled trades were not at the forefront of career options when I was in high school,” said Doyle, who was studying aeronautical engineering at Western Michigan University when he landed a summer job at RCO Engineering.

After multiple opportunities to work in a field he was interested in and earning a good wage doing it, Doyle eventually left school and has been advancing his career at RCO Engineering ever since.

“I’m glad it worked out the way it did,” Doyle said, noting that it doesn’t matter what path you take as long as you work hard and remain dedicated you’ll find success.”

Community engagement

Rowinski believes that part of their success in “Fueling the Talent Pipeline” has been the increase in engaging conversations between K-12 students and Macomb County manufacturers.

One way this has been done is through Manufacturing Day.

Each year, thousands of high school students from across Macomb County are given tours of manufacturing facilities, where they are given a firsthand look at how new technologies are being used in the workforce, whether it’s robotics and AI or welding and CNC (Computer

numerical Control) programming. This past year the county had more than 60 manufacturers offering to host tours.

“This model program connects employers with educators to provide meaningful career exploration activities for students and to prepare the next generation of our workforce for the interesting and well-paying jobs offered by local companies,” Rowinski said, adding that their approach is collaborative and community-driven.

“We meet with area employers to understand their workforce challenges and then partner them with schools that offer related career training. Through these partnerships, students gain greater insight as to how their interests and abilities, combined with the appropriate credentials, lead to rewarding careers.”

Hildebrand concurred.

“When our students have exposure to manufacturing companies within the county as early as their freshman year of high school, and these experiences become more in depth throughout their high school career, they can see themselves working in these businesses as a long-term career,” said the principal. “When someone from a local company is coming into their classes to teach a skill, or working closely with them on a capstone project, or through school to work jobs and internships they form professional relationships and feel a sense of loyalty to that company.”

Romeo High School

Rowinski said what the county is facing now is how to take the pipeline to the next level.

One example could be the Romeo Ford Engine Project.

When the MCPED asked Evva Dossin, who is the CTE and work-based lead coordinator for architectural design at Romeo High School was asked if she would be interested in enlisting her students to work on the Romeo Ford Engine project, she immediately jumped at the opportunity.

“This large property and facility, literally in our backyard, is deeply intertwined with our Romeo community and history,” Dossin said, of the former automotive plant that closed. “I thought it would be a great opportunity for the students to be involved because many people in the community wonder about the future of the Romeo Ford Engine Plant.”

Dossin said CTE teachers adapt their curriculum standards to align and incorporate relevant projects in the classroom.

“With this project, I initially wanted to cover the standards of site analysis, site planning, applying the design process, rendering, presentations, and collaboration with industry partners,” she said. “However, my architectural advisory committee brought up the usage of

AI photo generation in architecture, and I knew we had to change the scope of the project to integrate this new technology.”

Once completed, students will present Ford with a broad proposal for future development of the site. Their final presentation will include a site analysis, schematic design sketches, their proposed CAD/Photoshop rendered Design Development Site Plan, AI-generated images of the proposed building(s), and a concept design statement.

To top it off students will present their project before parents and the community May 29 at Romeo’s Graubner Library.

“The industry partners involved in this project have been fantastic,” Dossin said, adding that the project has been so successful in allowing students to apply theoretical knowledge to a practical, real, in-my-backyard-project other CTE classes are wanting in on it.

Pursuing options

Anthony Gabriel also loved his time at MADE.

However, he is among the many students who have chosen to obtain a university or college degree before entering the workforce.

“My parents always wanted me to go to college,” said Gabriel, although admitting he became enamored with campus life after sitting in on a lecture and is currently pursuing his bachelor’s degree in robotic engineering at Lawrence Technological University.

“I want to work for a place like General Dynamics or Boston Dynamics,” Gabriel said, before launching into an excited conversation about a mobile robot dog that manufacturers are making. His dream is to come up with a machine that makes clothes or other fashionable apparel.

Gabriel, who was among the first students to graduate from MADE, had initially chosen another academy but could not get in because of the waiting list, so he enrolled in the program at Stevenson and thrived.

“We were like a family,” said Gabriel, who said what he learned in his high school program has also given him an advantage over other students who never learned skills like welding, computer programming or how to work with circuits.

“I’m ahead of them,” he said.

Also providing a crop of new talent every year are Macomb Community College’s exploratory courses.

Don Hutchison, dean of engineering and advanced technology at Macomb Community College said MCC has a lottery of programs that serve students looking to work in

manufacturing be it robotics, mechatronics or CNC programming, which is really an area that's in need of young talent.

Hutchison said what's great about the programs at MCC is that many of the skills are transferable from one program to another, so students can always change career paths.

"We also have an advisory board that will engage with us frequently," Hutchison said of the representatives from manufacturers like Ford, General Motors, Drake Industries and Albert Kahn Associates, who keep Macomb County's programs abreast of the skillsets or areas of need that might come up.

Among those expecting even more from Macomb County's talent pipeline is Cliff Weyhing.

"It's getting better," said the manager of human resources for ROC Engineering. "It's not 100% but between the apprenticeships and school CTE (Career and Technical Education) programs, we'll get there."