OUT OF THE CLASSROOM AND INTO THEIR FUTURE
Out of the Classroom and Into Their Future

Profile: X-L Engineering’s Prikos Family

Ridgewood H.S. Students Talk About TMA

TMA 2017 Mayors & Manufacturers Breakfast

TMA Members Host 2017 MFG Day Tours

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The Technology & Manufacturing Association (TMA) was founded in 1925 by eight small manufacturing companies who believed they could better themselves by associating with one another. Through the years, members established programs and services that would help their businesses grow and prosper, train their employees, and provide medical and retirement benefits. As a result of these efforts, TMA has grown into a not-for-profit organization of precision manufacturing and supplier companies in the greater Chicago area.

TMA is governed by a Board of Directors, composed of executives from member firms. A full-time professional staff works closely with the Board, its committees and trust.
message from the president

TMA Members & Friends,

The challenge of staffing the manufacturing floors of today and tomorrow will not yield easily, but I am happy to share that TMA has opened another beachhead in the effort.

From the TMA Foundation’s work supporting high school programs, to our partnership with Bethel New Life, from our long-term engagement supporting Manufacturing Renaissance to our work training non-violent offenders with Safer Foundation, TMA and its members have been part of the solutions.

In this issue of the News Bulletin we highlight an exciting new effort. The leadership of Ridgewood High School was challenged by being land locked and resource constrained, yet they wanted to create an opportunity for their students to learn advanced manufacturing skills. Working creatively with TMA’s Training and Education staff under the leadership of Patrick Osborne, focusing on the interests of the students, a new solution was crafted that is a win for students, a win for Ridgewood High and a win for the future of manufacturing.

Today, the first class of Ridgewood High students are taking their Advanced Manufacturing coursework at TMA’s hands-on training center. The students are bussed to our Schaumburg building and are instructed by Jack Krikorian our lead TMA instructor. The students get the kind of instruction that can lead to a high-paying career in manufacturing, the high school avoids the daunting startup costs of establishing a training center, and the industry gets a new set of bright and willing minds.

What works for Ridgewood might work for other high schools. Hopefully this is the beginning of another part of the solution to the skills-gap. If you know of a school that should be considering a similar solution, drop TMA staff a line and share the idea with your school’s leadership. We can assist you.

Entering my fourth year working at TMA, I continue to be impressed with the generosity of TMA’s membership and their willingness to share their time, talent and treasure in an effort to improve the industry. I am also very proud of and impressed by the TMA professional staff’s willingness to embrace change and innovation as they work to serve members and their employees.

Occasionally, the question is posed to me, “Why join TMA?”. After I answer by sharing the short version of TMA’s programs, committees, advocacy, peer groups, education & training, and member involvement, I often pose my own question, “Why wouldn’t you want to be a member of TMA?”.

Steve Rauschenberger
OUT OF THE CLASSROOM AND INTO THEIR FUTURE
RIDGEWOOD HIGH SCHOOL & TMA

Every manufacturer says one of their top concerns in a reviving manufacturing era is, “Where will our next generation of engineers and machinists come from? How can we find those interested in learning the technology and skills that will keep our plants productive in the future?”

At the same time, a growing number of high school principals and district superintendents ask, “Where will jobs in the second half of the 21st century be?” and “Into which career pathways should we guide our high school students for bright and productive futures?”

The standard assumption for concerned educators has been to prepare their students for careers in computers, technology, white collar professions that require expensive educations. But that’s not the pat answer anymore. There’s currently a abundance of college-educated workforce that are finding it more and more difficult to land jobs that match their education, debt and interests.

It’s become a real problem for educators – but one that can be remedied with just a little adjustment to education emphasis.

Manufacturers as a rule offer good-paying jobs with near-limitless ceilings for learning and advancement. They provide excellent benefits such as health care insurance and 401k retirement plans, often along with advanced education and skills training.

High levels of precision engineering and products demanded by medical, automotive and aerospace industries have changed manufacturing facilities dramatically to now being well-lit and cleaner than shop floors of years past.

With all that in mind, educators like those at Ridgewood High School in Norridge, Illinois, reached out to TMA to brainstorm how they could work together to add manufacturing to the district’s career pathway options.

Ridgewood High is located midst a tight-knit community – so tight, in fact, that the school itself has no room to expand. They are land-locked, and like most school districts, tight on funding. To establish a pathway for learning CNC machining at the facility would demand more room, at least $250,000 in machinery, equipment and tooling, and at least one fulltime instructor.

Still, area manufacturers advised the district about the openings at their plants within the community. There were job openings ready and waiting for their students. So what would be the answer?
TMA’s PERSPECTIVE ON RIDGEWOOD CLASS

“We had the resources and they had the interest,” Patrick Osborne, TMA’s Vice President of Training & Education, told TMA News Bulletin.

After substantial collaboration, on the first Tuesday of September, eight high school seniors pulled up to TMA’s Schaumburg headquarters in a white bus labeled “Ridgewood High School” to launch a new experiment for the school, TMA and the students themselves.

At the end of 20 weeks of spending three hours at TMA every Tuesday and Thursday, the seniors will have acquired NIMS credentials in CNC machining and a “golden” TMA certificate - “golden” because presenting a TMA certificate to a potential employer more often than not is met with a job offer, Osborne said.

Under the guidance of TMA instructors Jack Krikorian and Paul Newman, the Ridgewood students will review math, print reading, tool metrology, and precision measurement reading in their pre-manufacturing course. Then they will begin learning CNC machining.

continued on page 8
By Fran Eaton

Here’s something that should get your attention: almost every part X-L Engineering makes fits within the palm of your hand, the company’s president Paul L. Prikos says.

Now in its fourth decade, X-L Engineering designs, engineers, manufactures and assembles precision components for industries including medical, aerospace, defense, hydraulics and pneumatics.

Paul’s father “Bud” started the company in the 1970s after leaving an engineering job with a large company. “I wasn’t happy working in the large corporate world and wanted to go into business for myself. With my dad’s help, I bought X-L Engineering,” Bud said. Bud added onto and later doubled the size of the Niles site. In 1999, the company added another facility in Elk Grove Village.

“We grew from ten employees to 100,” Bud said.

After graduating from college and working elsewhere for several years, Bud’s two sons joined their father’s business in 2004. The business expanded as opportunities increased. Bud is still active at X-L, but he’s gradually spending more and more time away from the shop.

Now older son Paul is President of X-L Engineering and runs the Niles facility’s daily business. As a second-generation business in an industry that’s speeding into more and more technology and computer-based work, Paul says the challenges he faces are similar and yet very different from those with which his dad dealt.

One is the serious talent shortage, creating a need for qualified personnel that everyone in the business is facing. “It’s difficult to get someone off the street and have them hit the floor running,” he said. “Often, the best talent we’ve had has been from within. As they say, ‘You can train someone and risk having them leave, or you don’t train someone and risk having them stay.’”

“It’s rewarding to watch people that work here grow, especially when you get in a group of talented individuals,
they start rolling and things are really good,” Paul said.

In addition to the search for talent, X-L faces challenges that come with precision machining – crucial tolerances that could make the difference between life and death, especially when creating medical and surgical instruments.

“In general, our work is small enough to fit in the palm of your hand. Since the tolerance is so tight, heat treating and grinding has to be exact,” he said.

Jack Prikos, who is vice-president and spends most his time at the Elk Grove Village facility, oversees much of the company’s human resources, marketing and quality control.

Jack joined the business in 2010, shortly after the darkest days of the most recent manufacturing recession. At that time, X-L Engineering, like most U.S. manufacturers, went through a difficult time of layoffs. When orders picked back up, they faced equally difficult challenges.

“We had to get creative when the orders came pouring back in,” Jack said. “Things were humming pretty well by 2012 and 2013. Since that time, business has hit its highest numbers ever. Now things are leveling off.”

Investing in machines that make X-L Engineering appealing to demanding customers became a major consideration, but one that has paid off. “Our approach was very well rounded. We made improvements to capacity while adding to quality capability and upgraded software,” Jack said.

TMA’s network of peers has been valuable during those good times and bad, Paul said.

“Being inside these four walls day in and day out, you can feel isolated – and sometimes you are. It’s not easy to get to TMA events and committees, but doing that brings so much to the work we do,” Paul said.

“There’s political information at TMA, education and networking. We discuss best business practices and how to survive during the tough time. Being around others going through similar things and with experience, you know you’re not alone.”

“People within TMA are the most optimistic, positive people you’d ever want to meet. When you go, it’s like you feel after you just worked out. You’re glad that you did it. I am always glad I did,” he said.

Paul’s enthusiasm about TMA is a family tradition, too. He now serves on TMA’s 401K Trust Board. His grandfather Paul Prikos served as chairman of TMA’s Board of Directors in 1962, and his father “Bud” Prikos served in the same capacity in 1986.

For more information about X-L Engineering and its precision machining services, check out their website at www.xleng.com.
TMA’s goal for each of the students that make it through TMA’s premiere high school program is for them to launch careers with a TMA member company, and then, as they’re ready, return for TMA’s three-year apprenticeship program.

“These students would begin at an advanced level as compared to other TMA students,” Osborne said.

If the program works, TMA could host up to five similar programs at their Schaumburg facility each school year. “I’m hopeful and excited about the possibilities of this program,” he said.

DISTRICT 234’s PERPECTIVE

But what do District 234 school officials think about the program? Is it worth their resources and effort to get those seniors on the bus and get them over to TMA twice a week?

Working hand-in-hand with TMA training fits perfectly with District 234’s philosophy, Superintendent Dr. Jennifer Kelsall told TMA News Bulletin.

“Our goal is for every student to have their own individual path of where they want to go, and how they want to get there,” she said. “And that it isn’t about sitting in a seat for so many minutes, having a bell ring, then moving to the next destination.

Rather, Kelsall said, education should be about meaningful learning that a person can apply immediately, and through which one can obtain a meaningful position in order to live independently.

“And then begin giving back to the community…” she said.

Kelsall’s associate Jennifer Snyder was the one that introduced the concept to Ridgewood students to consider for their senior year.

“I cast a wide net at first by emailing kids that were going to be seniors the next year,” Snyder said. “I then pushed out information about manufacturing — that it wasn’t like most people perceive the work. Instead, much of it now is highly skilled, precision work.”

One by one, students began showing interest. TMA’s Patrick Osborne visited Ridgewood High and brought along some of the items students made at TMA. Then Snyder brought a group to visit TMA. The students were impressed and interested.

“I have to say TMA’s ‘Wall of Fame’ board room with leather chairs made a big impression. To know all those people whose portraits are on the wall had a relationship with TMA was inspiring,” Snyder said. “The students said they felt like they could do it, and fit in at TMA.”

Snyder said the first group of students sent to TMA has been a trial and that school officials are aware they’re putting a lot on the first set of students.

“We’ve told them they’re setting the way for the next group of kids, and they’re doing that. We know we’re asking a lot. We’re asking them to go into industry level training, asking them to act like adults,” she said. “And so far, they’re rising to the challenge.”

RIDGEGROUD STUDENTS’ PERSPECTIVE

What do the Ridgewood students think about the training at TMA and the value of what they’re learning?

Every one of the students told TMA Bulletin that they’re learning more than they would have sitting in typical general education courses at high school. Some said they wish the course started a year earlier.

Each one said the program has changed their perception of manufacturing and future careers that could be available to them.

In other words, they’re excited and very happy to be in this ground-breaking experiment.

And as a matter of fact, these Ridgewood seniors could very well be just a part of the answer to the questions manufacturers are asking about future workforces.

Learn the students’ reactions on page 10
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The students say TMA’s classes opened their eyes to appreciate more how things are made, to realize the previously unknown opportunities in manufacturing, and to think differently about the industry as a whole.

“Now I see everything has to come from somewhere,” Bobby Hall said. “The parts that make things work have to fit together perfectly – down to the thousands of an inch.”

Those math intricacies in manufacturing fascinate Jose Bedon. “I like to learn how things work. I’m a math person. I like the numbers. And I like to work with my hands.”

Jose and several others in the class also play on Ridgewood High’s football team. The TMA class is affecting the way they think about next steps.

“I want to go to a college that teaches engineering. If you’re asked to play football at a college that doesn’t teach engineering, you’re basically wasting your time,” Jose said. “If you want to do this work, you should go to a college that will help. After this class, you’ll know more stuff and know what the jobs will require.”

Jacob Lorscheid said the first few weeks of class changed his perception of manufacturing.

“People say that manufacturing is really dirty, and that you can get lung disease because of all the chemicals and smoke, but it’s not that way, it’s really clean,” he said. “You don’t have to worry about that anymore.”

What do the students like most about the class? They all agreed running the CNC machines and making parts with specs was the best.

“Everyone back at school is just sitting in a classroom, we’re doing something,” Rocco Di Piero said, smiling. “When other kids ask me where I am on Tuesdays and Thursdays, I tell them I’m learning to run machines, and show them what we’ve made.”

Running those machines is the best part for Jacob, too.

“When we first got here, we just walked around and looked at the machines, and we thought ‘No way’ would we be able to use them, to do what we know now. We’ve made some parts already,” he said, and pointed to three shiny parts sitting on instructor Paul Newman’s desk.

Ridgewood High administrators are already considering a joint effort with TMA next year. All eight students said they would encourage others to take the class.

The class was divided on whether the opportunity should be opened to juniors in high school. Some said the junior year was too demanding to take the class, that students would likely fall behind in other courses. Others thought it would be good to start a year earlier.

“No, I think you should do it in your junior and senior year,” Jose said. “You should learn during your freshman and sophomore years and start your career in your junior and senior years.”

The students agreed their parents are encouraging and supportive. Some parents are relieved that their seniors are focusing on pursuing a career path.

“My parents said it’s a good opportunity, and can help give you an idea about what you want to do with the rest of your life,” John Rossi said, as classmate Kasper Zurek nodded in agreement.

They all also thought girls should consider the same career options and the classes.

“I’m checking this out, not sure exactly what I want to do, but this is interesting.” Zach Karkoszka said. “There are more job possibilities than I knew that are hands on.”

“The class is opening up new fields of opportunity, and I’m seeing what’s out there,” senior Michael Gonzalez said. “What I’m seeing is interesting. I really do enjoy it a lot.”

And although he really didn’t know what area of manufacturing he’d end up in, he was open. “Right now, anything - I’ll take it.”

And what would they say to a potential employer? “Hire me!” they shouted, laughing.
NOVEMBER 1
Operations & Plan Managers Peer Group
Please join us for the Operations & Plant Managers peer group to discuss managerial issues and concerns in an open forum. A brief conversation about Solar Powering of Manufacturing Facilities will be included. Free to all manufacturing members. Lunch included.
TIME: 11:30am - 1:30pm
COST: Free
LOCATION: Oak Brook, IL

NOVEMBER 3
42nd Annual TMA Prayer Breakfast
Join us for the 42nd Annual TMA Prayer Breakfast hosted by the Christians in Manufacturing Committee. This year’s featured speaker is Kyle McCarter, Illinois State Senator for the 54th District. Senator McCarter is a fellow manufacturer and TMA member. Come hear from Kyle as he shares his story of the collaboration of faith and manufacturing. All guests will receive a full hot breakfast and special gift.
TIME: 7:30am - 10:00am
COST: $30
LOCATION: Bloomingdale, IL

NOVEMBER 7
Finance Peer Group
Free to all manufacturing members. Lunch provided. Join your CFO, comptroller and accounting peers to discuss challenges, strategies and solutions in the area of finance. For manufacturer members only. Sponsored by CIBC, formerly The Private Bank.
TIME: 11:30am - 1:30pm
COST: Free
LOCATION: Oak Brook, IL

NOVEMBER 9
Owner’s Dinner
Exclusively for Owners, Presidents & Company Executives of our Manufacturing Members. Discuss the current business climate, share stories and swap strategies at an exclusive venue in the Chicagoland area. Includes full dinner and open bar. Sponsored by: A.S.G. Staffing & MB Financial Bank
TIME: 5:30pm - 8:30pm
COST: $100
LOCATION: Elmhurst, IL

NOVEMBER 15
Safety Peer Group
Free to all manufacturing members. Lunch provided. Join your TMA peers to discuss this month’s topic: Temporary Employee Safety Requirements. Learn about OSHA expectations regarding working with temporary employee agencies and how the employer must address these employees. Insurance coverage considerations will also be discussed.
TIME: 11:30am - 1:30pm
COST: Free
LOCATION: TMA Schaumburg

CONTACT: (800) 676-7374
*The research and corresponding list are based on a ChannelE2E™ worldwide survey of MSPs, conducted in Q1 2017. Rankings are based on annual recurring revenues in specific vertical markets.

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For information, contact Maxine Difino at 847.825.1120 or mjd@tmaillinois.org
While Chicago elected officials do all they can to woo Amazon to move its new headquarters to the city, others familiar with the area's workforce and the challenges 10,000 new jobs in the city would bring aren't as optimistic about the project.

Bringing Amazon to the Chicago area was one of several issues that came up during a panel discussion at the Technology & Manufacturing Association's annual Mayors & Manufacturers breakfast held at the group's Schaumburg headquarters in late September.

TMA President Steve Rauschenberger asked if Amazon's move would prompt challenges for manufacturers offering similar entry-level salaries that already remain unfilled despite active outreach.

“I really wonder where Amazon is going to get the people from,” Zach Mottl, chief alignment officer for Atlas Tool Works said. “I’m trying to hire them too, and I’ve been trying for a couple of years and haven’t found them – even for entry level jobs. I’m having a hard time finding them.”

Mottl, who also serves as chairman of TMA’s Government Relations Committee, said he’s noticed a growing complacency among the younger applicants, lacking commitment to and appreciation for the opportunities their plants offer. “There’s an attitude of ‘I can be vacant from my job and not call in for days,’” Mottl said. “And recent Cook County policies that have been put into place have made it worse.”

Besides the $15 minimum wage ordinance, Cook County – including Chicago - now requires mandatory paid time off, allowing employees to take up to two days off with pay, without letting their employers know why they’re not at work.

Manor Tool’s Tom Simeone agreed with Mottl, and said area schools are not teaching math to students – forcing him and other manufacturers to invest in re-education in an area that should be covered during elementary and high school years. “I don’t know what kind of workforce Amazon is trying to lasso,” Simeone said. “But nearly every younger person that comes into my facility has problems with math basics – not knowing addition, subtraction, multiplication and division. The schools need to teach math.”

Hanover Park Mayor Rod Craig had a slightly different take on the challenges an Amazon headquarters locating in the city would bring. Serving on the area’s Metra Board, Craig said he wasn’t sure how 10,000 people would get downtown on a daily basis.

“That would demand more transit cars on the rails, while demanding more freight to be transported at the same time,” Craig said. “I just can’t see highways expanded to be twelve lanes wide going in and out of the city. I just don’t know how they plan to get those 10,000 into the city.”

The morning’s discussion, hosted by TMA’s Government Relations Committee, closed with questions and comments from those in attendance.

The GRC worked with Cook County Commissioner Sean Morrison to encourage local municipalities to exempt themselves from the Board’s ordinances calling for $15 minimum wage and mandatory paid time off. Of Cook County’s 132 local jurisdictions, 109 chose to opt their municipalities out of those two mandates.
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“Our biggest challenge is finding people. We need people that can fix machinery. We need people that can design tools. We need people that can build tools …”

That was part of Principal Manufacturing COO Ben Barnett’s message for five tours of high schoolers that visited their Broadview, IL facilities on Manufacturing Day 2017.

“We have young people and older people in our tool and die shop,” Barnett said. “Those older people are going to retire one day, so we need to continue to bring people in.”

Barnett’s time was well-spent encouraging high schoolers last year when tours like the one from Morton High School came through Principal, he said. Indeed, one of those students expressed interest in learning more, and she’s now enrolled in Principal’s on-site intern program after school.

Members of Barnett’s staff took the Morton High schoolers on tours of the plant, explaining various tasks departments took on, and how they, too, could start on productive careers at Principal.

Over 100 different locations throughout Illinois hosted Manufacturing Day 2017 on October 6, 2017, launching what Illinois Governor Bruce Rauner deemed “Manufacturing Month” statewide.

Rauner’s proclamation encouraged local collaborative efforts be designed to expand knowledge about and improve public perception of manufacturing careers and manufacturing’s value to the Illinois economy.

It also urged all school districts, community colleges and manufacturers in Illinois “to invest time and resources to celebrate the contribution manufacturers make to the fabric of our state’s communities.”
TMA MEMBERS HOST 2017 MFG DAY TOURS

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