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SEND US YOUR STORY

Each issue of The Record features our members. We want to hear from you. Send us stories of successes, innovations or experiences.

The submission deadline is the first of the month prior to publication.

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UPCOMING NTMA EVENTS



SEPTEMBER 16, 2026
CHICAGO, ILLINOIS



NOVEMBER 10-13, 2026
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FROM ROGER

a message from the president



The old saying, “Time flies when you’re having fun,” has been around since the 19th century. Whether we’re having fun or simply trying to keep pace, one thing is undeniable — time moves quickly.

For some in our industry, business is thriving. For others, the challenges seem relentless. Regardless of where your company stands today, the pace of change isn’t slowing down. In fact, it is accelerating faster than most of us have experienced in our careers.

As we move through the third quarter and September comes into view, those in precision manufacturing naturally turn their attention to IMTS in Chicago. For decades, IMTS has been synonymous with technology. Today, however, it represents much more than machines on a show floor. It represents the future of manufacturing.

Artificial intelligence, automation, digital manufacturing, workforce solutions, advanced tooling, robotics, connected factories and data-driven operations are reshaping our industry at an unprecedented rate. We have entered an era where change is no longer occasional — it is constant. Because of that, I believe IMTS 2026 may be one of the most important editions of the show in recent memory.

NTMA is fortunate to have a long-standing partnership with AMT, the owner and producer of IMTS. That relationship provides our members with unique access to the industry’s technology leaders — from machine tool builders and tooling manufacturers to workholding, automation, ERP, metrology, software and countless solution providers that help manufacturers compete every day.

So, should you attend IMTS? Absolutely.

The Record 2

Even if you are not planning to purchase equipment this year, the ideas, innovations and relationships you’ll gain can help shape your company’s strategic direction for years to come. Exposure to emerging technologies often creates opportunities you didn’t know existed.

Relationships remain one of the greatest competitive advantages for small and medium-sized manufacturers. Whether those relationships are with fellow manufacturers, customers, suppliers, technology providers or strategic partners, they often determine future opportunities. IMTS — and the NTMA community surrounding it — is where many of those relationships begin and continue to grow.

During IMTS, NTMA will once again highlight our National Associate Members and Partners that invest their time, expertise and resources into strengthening our association and our industry. Look for the “Proud NTMA Partner” signage at participating booths and take a moment to introduce yourself as an NTMA member. A simple thank you for their support goes a long way toward strengthening the partnerships that benefit all of us.

We will also host an NTMA Member Lunch at McCormick Place. Several of our National Associate Members will provide insights on emerging technologies, market trends and highlights from the show. Seating is limited to 75 attendees, so be sure to register using the QR code included with this article.

Looking beyond IMTS, our partnership with AMT continues as we co-host the 2027 MFG Meeting, April 13–15, 2027 at the Hyatt Regency Maui Resort and Spa in Maui, Hawaii. I encourage you to begin

planning now. It is another outstanding opportunity to build relationships with industry leaders while discussing the future of manufacturing in a collaborative setting.

I firmly believe our industry stands at the threshold of a transformational period unlike anything we have experienced in decades.

Demand for American manufacturing continues to grow, driven by reshoring, supply chain resiliency, national security priorities and increasing investment in the Defense Industrial Base. At the same time, manufacturers continue to navigate workforce shortages, leadership succession, rapidly advancing technology and increasing customer expectations.

Every generation faces defining moments. The companies that thrive are those willing to adapt, invest and lead. The question each of us must answer is simple: Where do you stand in this environment of change and opportunity?

As President of NTMA, I ask myself that same question every day. Our association is transforming alongside our industry.

Our highest priority remains workforce development through the rebranding and expansion of NTMA-U, providing members with a modern, scalable workforce training platform. We are also building the NTMA Workforce Development Endowment Foundation to ensure long-term investment in developing the next generation of manufacturing talent.

Leadership development is another major focus. We are developing a new Elite Leadership Training program for small, medium and large member companies. Through a new Leadership & Growth

System, we will be helping owners and managers move beyond simply running their businesses to mastering them. For companies ready to accelerate growth, our Leadership & Scaling System will focus on building stronger organizations by developing leadership teams, improving execution and preparing companies to scale successfully, whether you are a single or multi-location company.

We will continue expanding our network of industry partners to deliver greater productivity, efficiency and cost savings for members while strengthening peer-to-peer learning through conferences, cohorts, webinars and executive networking opportunities.

Internally, NTMA is also embracing artificial intelligence and other emerging technologies to improve operational efficiency, allowing our team to spend more time serving members and growing the value of the association.

Perhaps most importantly, NTMA’s voice has never carried greater influence. Recently, I had the opportunity to participate in discussions in Washington, D.C., with Vice Admiral Robert Gaucher, USN, regarding the impact that CMMC requirements have on small and medium-sized manufacturers. During that discussion, it was explained how compliance requirements have unintentionally created barriers to entry for many precision manufacturers supporting our nation’s defense needs.

The week of July 13, 2026, the Department of Defense

announced the suspension of CMMC Phase II implementation requirements while additional review takes place. Whether or not those events were directly connected, they reinforce an important point: NTMA has a seat at the table. That seat exists because thousands of manufacturers speak through one unified voice. The stronger our membership becomes, the stronger that voice becomes.

As we look toward the future, success for our companies, our association and our industry will depend on our willingness to scale, collaborate and lead.

I encourage you to become even more engaged in NTMA. Involve members of your leadership team. Participate in events. Take advantage of programs. Help shape the future of precision manufacturing.

And finally, invite another manufacturer to join NTMA. Most of us joined because someone asked us. The next member — and perhaps the next industry leader — is waiting for the same invitation. Together, we can ensure that American precision manufacturing not only keeps pace with change, BUT LEADS IT.

Roger Atkins, President, NTMA



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WELCOME

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ERIE COPPER WORKS

Akron Chapter

 Erie Copper Works (ECW) is a copper fabrication shop founded in 1967 and located in Medina, OH. Trusted by the international steelmaking industry for over 50 years, the company specializes in the fabrication and repair of current-carrying components for Electric Arc Furnaces, including copper forgings, castings, water-cooled cables and bus work. With deep expertise in copper and dissimilar metal welding, machining and fabricating, Erie Copper Works delivers the precision and reliability that steel producers depend on to keep their furnaces running. In 2024, ECW was acquired by American Combustion International, an Atlanta, Georgia based OEM of combustion products for the steel industry. The partnership brought expanded engineering resources and complementary product lines, combining ACI's combustion expertise with Erie Copper Works' copper fabrication capabilities to offer steel producers a broader, more integrated solution. Erie Copper Works prides itself on coming up with novel, cost effective solutions by leveraging their expertise in conjunction with the mills and the OEMs of equipment to minimize downtime and costs. By offering 24-hour emergency repair services, ECW ensures that steel can continue running through the mills.

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Medina, OH 44256
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www.eriecopperworks.com

JONES MACHINE COMPANY, INC.

Boston Chapter

 Jones Machine Company, Inc. is a full service machine shop specializing in CNC milling/turning, assembly and fabrication. We are located in Danvers, MA, just a short distance from the city of Boston. Our major goal has always been focused on the assurance of quality and service in every facet of our operations. With over 50 years of experience in the machining trade, we know how important it is to be cost effective, have zero defects and deliver just-in-time in today's demanding market place. Our customers span a variety of industries including semiconductor, medical instrumentation, pharmaceutical and beyond. Our CAD/CAM and Mastercam programming allow us to utilize standard CAD formats, such as, IGES, DXF, DWG and Solid Model Files. Our state-of-the-art CNC turning and machining centers, combined with our expertise in machining plastics, exotic alloys and ferrous and non-ferrous materials, position us on the cutting edge of the industry, ready to meet all of our customers' needs. As precision machining needs are called for in your day-to-day operations, Jones Machine Co., Inc., would like to be of assistance. For a fast response call, fax, email or mail your specifications today, and we will be glad to quote them. We welcome you to visit our webpage below to see a detailed capabilities list.

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SPECIALTY MACHINE

North Texas Chapter

 Founded in 1972, Specialty Machine is a precision contract manufacturer specializing in complex, tight-tolerance machined components and assemblies for customers operating in highly demanding industries. With manufacturing facilities in Lago Vista and Marble Falls, Texas, the company supports aerospace, defense, semiconductor, energy, chemical processing and advanced technology customers throughout the United States. Specialty Machine provides advanced 3-, 4- and 5-axis CNC machining, CNC turning, sheet metal fabrication, welding, EDM, cylindrical grinding, assembly and comprehensive inspection services. The company regularly manufactures components from challenging materials including titanium, Inconel, Hastelloy, Monel, beryllium copper, stainless steels and engineering plastics, supporting applications where precision, reliability and performance are critical. Certified to AS9100D and ISO 9001:2015, ITAR registered and serving both commercial and defense customers, Specialty Machine is committed to delivering exceptional quality, responsive customer service and dependable on-time delivery. With more than five decades of manufacturing experience, the company partners with customers to solve difficult manufacturing challenges and produce mission-critical components that perform in the most demanding environments.

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The World According To... invites viewers to see through the eyes of the leaders shaping the manufacturing industry. These renowned visionaries will share their insights on the world, the trends driving manufacturing technology, and the possibilities that excite them.

STREAM NOW AT IMTS.COM/WATCH



FINANCIAL SERVICES: BEYOND THE HIRE: BUILDING TEAMS THAT ACTUALLY THRIVE



Most shop owners approach team building like it's a checklist. Find skilled people. Pay competitively. Assign work. Repeat. But somewhere between hiring the right machinist and building something that lasts, something gets lost.

The real work isn't in the hiring. It's in what happens after.

Strong teams don't form because you assembled talented individuals. They form because those individuals trust each other,

understand what the shop stands for and feel safe speaking up when something's wrong.

Many owners treat culture as a side project, just something you "get to" after hitting production targets. In reality, culture is the operating system for everything else. Without it, your best people leave, your problems repeat and growth slows.

Building teams that thrive requires three things:

First, clarity on what you actually stand for. Not the polished version in your handbook, but the real values that shape decisions. Do you reward precision over speed? Do you support people who make mistakes while learning? Your team knows. Live it consistently.

Second, create psychological safety. People bring their best thinking when they can be honest about problems without fear of blame. That means you go first. Admit what you don't know, ask for help and show that mistakes are how we improve.

Third, invest in people's growth. High performers don't just want a paycheck. They want to know you're committed to their future. Training, skill advancement, a real career path. Time spent here compounds over years.

The best teams are built through intention, consistency and the willingness to do the harder work of leadership. But here's the thing: you can't build clarity, safety and growth on chaos. Your HR systems (payroll, benefits, onboarding, performance tracking) aren't distractions from culture. They're the foundation of it. They make your values visible. They create consistency. They show your people you're serious about their growth. When those systems work right, you're free to do the actual work of leadership: presence, conversation and making sure your people know their contribution matters.

That's how you keep your best people. And that's how you build a shop that lasts.



Chris Allen is the Chief Marketing Officer at Auris. He has a decade of executive leadership in marketing at B2B tech and SaaS companies. Prior to Auris, Chris was the SVP of Marketing at Global Payments where he scaled growth marketing, led through international mergers and acquisitions and redeveloped their worldwide product and company branding.

TECH/AI: THE AI WAVE IS COMING TO THE SHOP FLOOR



Technology rarely arrives all at once. It tends to appear first as a headline, then as a tool and finally as a habit.

Over the past two years, artificial intelligence has moved through the first two stages quickly. We've seen it write a memo, summarize a meeting, draft a job posting or turn a messy spreadsheet into something useful. In offices, it is

changing expectations about speed, cost and what one person can accomplish.

On the shop floor, however, the wave is still building.

Precision manufacturers have lived through transformation before. We know that a clever demo does not automatically hold tolerance, reduce scrap, train an operator or ship a job on Friday. Real manufacturing is physical, exacting and unforgiving. That is why AI may feel less urgent here than it does in marketing, finance or software — the impact is yet to hit.

But that would be the wrong conclusion.

AI will not replace the fundamentals of machining, tooling, quality and craftsmanship, but it will put pressure on every process around them. Shops that connect their data, clean up workflows and teach their teams to use these tools will gain speed and resilience. Shops that wait for perfect technology may find competitors learning faster.

Make no mistake: AI is coming to manufacturing. The only question remaining is how prepared we are.

For NTMA members, the opportunity is practical, not futuristic: start small, measure results, protect what matters and buckle up. The next productivity race is already underway.



Daniel Soderlund has worked for some of the leading companies empowering manufacturers with technology for over two decades. Before joining CloudNC, he worked with ProShop ERP and FARO Technologies. He loves empowering organizations to achieve explosive results with tailored solutions, driving growth and success.

ADVOCACY: PENTAGON HALTS PHASE II EXPANSION OF CMMC CERT. REQUIREMENTS



Manufacturers performing work for the Pentagon will not be required to begin complying with the next phase of the Cybersecurity Maturity Model Certification (CMMC) program this fall as previously expected. The Pentagon announced July 13, 2026, that it is suspending implementation of CMMC Phase II third party certification while it reevaluates

the program and considers changes intended to reduce compliance costs and administrative complexity.

The decision postpones the planned expansion of third-party cybersecurity certification requirements that were scheduled to begin on Nov. 10, 2026. Companies will continue to meet existing Phase I requirements, including applicable self-assessments, while the Department reviews whether the current certification framework can be simplified without compromising protection of federal information.

Department officials said the review was prompted by concerns that the existing CMMC model has become overly burdensome for many companies in the Defense Industrial Base, particularly small and medium-sized manufacturers and non-traditional defense suppliers. According to the Department, compliance costs and duplicative administrative requirements have created barriers that can discourage companies from competing for defense work while offering limited additional improvements in cybersecurity. Both NTMA and PMA have repeatedly raised concerns with both Trump and Biden administration officials and lawmakers on Capitol Hill about the burdens placed on smaller businesses.

To evaluate potential changes, the Department has established a CMMC Reform Task Force and issued a Request for Information (RFI) seeking input from industry. Responses are due by Aug. 14, 2026, and will be used to develop recommendations for reform.



Omar S. Nashashibi is a founding member of Inside Beltway, a bipartisan lobbying and strategic consultant firm based in Washington, D.C. He may be reached at: omar@insidebeltway.com

INSURANCE: WHY SHOULD YOUR BUSINESS HAVE A DATA BACKUP STRATEGY?



Your business data is important, and losing it could be catastrophic. A data backup strategy can help ensure that you can recover critical business information after an incident.

CYBERSECURITY TIPS FOR EFFECTIVE BACKUPS

Consider the following:

- 3-2-1 Data Backup Strategy: A strategy for data safety that includes three copies of data saved on two different media, with one copy stored off-site.

- Cybersecurity Awareness: Train staff and establish clear policies. Introducing tools like simulated phishing can help test your employees for preparedness.
- Reliable Backup Storage: Choose secure servers or cloud-based systems to house your information.
- Set Backup Schedules: Regular backups can prevent significant data gaps. Assign responsibility to a key person or team.
- Regularly Assess Cyber Risks: Evaluate cybersecurity programs and policies to adapt to evolving challenges.

KEY BENEFITS OF A DATA BACKUP STRATEGY

The following can be factors to think about when putting your data backup strategy together:

- Business Continuity: protects against cyber attacks, disasters and human error; ensures critical operations run with minimal downtime.
- Data Integrity and Security: secures customer and business data; prevents loss, corruption and unauthorized access with encryption.
- Regulatory Compliance: meets data laws to avoid fines and shows commitment to ethical standards.
- Customer Trust and Loyalty: builds confidence with reliable data protection and strengthens relationships through trust.
- Support for Innovation: ensures stability for growth and enables adoption of new technologies to stay competitive.

Start taking data backups seriously today. Federated® offers a variety of cyber security risk management resources to consider, including Cyber Safety® (Powered by Zeguro), TrainingToday by BLR® and KnowBe4. Reach out to your local Federated marketing representative today for more information.



Jack West, National Account Executive for Federated Insurance®, is responsible for overseeing Federated's national affinity relationships and securing new association partnerships. An NTMA Exclusive Benefit Partner, Federated has a strong reputation of competitive products with value-added risk management programs and services. More information: www.federatedinsurance.com

TECHNOLOGIES FOR TOOLMAKERS

at IMTS 2026

ROBERT SCHOENBERGER, EXECUTIVE EDITOR, AMT — THE ASSOCIATION FOR MANUFACTURING TECHNOLOGY

Engineers used to design a lot more impossible parts: workpieces that couldn't be held in chucks or vices, internal geometries into which no cutting tool could reach and parts with walls so thin they couldn't support their own weight.

These days, not so much. Improved design and simulation tools catch many of those errors, and next-generation additive, subtractive and hybrid machines can build up or cut down components with incredible precision.

"Achieve the Impossible," the theme of IMTS, The International Manufacturing Technology Show, has never been more relevant. What's possible has expanded greatly in the past few years, and attendees of IMTS 2026 in Chicago, Sept. 14-19, will get a great look at how few limitations exist in modern manufacturing.

"Now is a great time to take advantage of new opportunities in technology," says Douglas K. Woods, president of AMT — The Association For Manufacturing Technology, which owns and produces IMTS. "When you look at manufacturing technology orders, productivity gains, capital investment and foreign direct investment flowing into North America, the momentum behind U.S. manufacturing is very real."



BY THE NUMBERS

IMTS is big — very, very, very big. Across 1.2 million square-feet of exhibit space featuring more than 1,800 exhibitors, and filling all four halls in McCormick Place, the show is organized into 10 technology sectors:

- Abrasive Machining / Sawing / Finishing
- Additive Manufacturing
- Automation
- Components / Cleaning / Environmental
- Fabricating & Lasers
- Gear Generation
- Metal Removal
- Quality Assurance
- Software
- Tooling & Workholding

ATTRACTIONS, EVENTS AND CONFERENCES

In addition to the sectors, IMTS 2026 features dozens of attractions, conferences and events.

The Industrial AI Arena, new this year, recognizes one of the fastest-growing technologies in manufacturing and features 40 technology companies, all making their IMTS debuts as they share the latest in artificial intelligence systems. Exhibiting companies include Colab AI Inc. (IMTS booth #237604), GVision-USA Inc. (IMTS booth #237616) and Viaduct (IMTS booth #237635).

The AMT Emerging Technology Center shows visitors the possibilities of manufacturing's future. This year, AMT is partnering with Oak Ridge National Laboratory to create an end-to-end manufacturing system that produces drone airframes and an AI-enabled rapid vehicle deployment display. MTConnect will show how connected systems improve efficiency, reduce downtime and support smart manufacturing initiatives, including lights-out operations.

The IMTS conferences and workshops provide deeper insight into emerging technologies, business strategies, workforce development and operational excellence. Whether you are looking to improve shop performance, understand the future of industrial artificial intelligence, explore additive manufacturing applications or gain financial and leadership insights, the conference lineup delivers targeted education and connections just for you.

The Smartforce Student Summit at IMTS 2026 (free for students, their parents and teachers) offers a unique opportunity to explore cutting-edge technologies in action, bringing the classroom to the shop floor. From robotics and automation to CNC machining and digital manufacturing, students can come and explore the world of advanced manufacturing through hands-on exhibits and interactive experiences.



WHAT TOOLMAKERS CAN EXPECT

Many of the largest machine tool builders will be unveiling the sort of new equipment needed to cut ultra-precise steel molds and dies. Okuma America (IMTS booth #338500), Index Corp. (IMTS booth #339119), Mazak (IMTS booth #338300) and DN Solutions (IMTS booth #338919) all plan to show off new machining centers, as do dozens of other machinery OEMs.

On the additive and hybrid manufacturing fronts, companies will be debuting equipment that can build internal cooling channels into molds, achieve formerly impossible dimensional tolerances and repair damaged tools, molds and dies by precisely rebuilding damaged areas layer-by-layer with additive tools.

Automation remains a hot topic with several exhibitors showcasing new robots, cobots and material-handling systems designed to improve productivity and lower plant costs.

The Industrial AI Arena features new companies, all

discussing technologies that can change how toolmakers take in new orders, track opportunities, better design processes and eliminate wasteful steps from the manufacturing process.

"Earlier applications of AI were powerful but narrow: a vision system that caught defects at one station, an algorithm that optimized one parameter on one machine type," says Ryan Kelly, AMT vice president of technology. In the upcoming AMT Industrial AI Report 2026, Kelly writes, "The current wave of AI, built on advances in large models, cloud infrastructure and connected data, has the potential to reach across the entire factory — from design and process planning through production, quality and delivery — and to reason across all of it simultaneously."

ATTENDING THE SHOW

Those interested in attending the show can go to [IMTS.com](https://www.imts.com) to register for the event, book hotel rooms, research exhibitors and find fun things to do in Chicago in September.

Here are a few basic tips for those who haven't attended before:

- Wear comfortable shoes: 1.2 million square feet of exhibition space is as big as it sounds.
- Research solutions before the show: With 1,800-plus exhibitors, it would be difficult to see every technology on offer, so make a list of your key challenges and the companies that may offer solutions. Use the IMTS Show Planner to optimize your itinerary and get personalized recommendations tailored to your interests.
- Register and book your travel ASAP. Hotel rooms get scarce as the show gets closer.
- Don't ask for ketchup on your hot dogs. In Chicago, only children ask for "hot dog sauce."

THE AMT AUTOMATION REPORT 2026
POWERED BY AMT — THE ASSOCIATION
FOR MANUFACTURING TECHNOLOGY

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member perspective MY FIRST TRIP TO IMTS

MICHAEL DOUGHERTY, OWNER TMCreativity LLC



In 2024, I decided to take my machining hobby and make it a business. To do that many things had to occur, but one of the biggest decisions was which machine of the many options out there was the right one to select for the business.

I knew it was time to invest in a machine, and I knew I wanted it to be a 3+2 axis configuration. However, I had not settled on what the right solution was for my needs. IMTS represented an opportunity to see and touch every machine and rotary that was in consideration and discuss the options with knowledgeable people.

My wife attended IMTS with me. Having a second person around to ask questions and later discuss the advantages and disadvantages with is always a big plus. We arrived Sunday morning and used the afternoon and evening to take in some of Chicago. We attended two days of the show together. We explored the city at night, and I did a day at the show by myself as she explored the city. We were able to get everywhere we wanted either by the shuttle service or walking.

To make the trip a success, I used the IMTS mobile app and website to determine which vendors to visit. I also planned out which sections of the show to walk each day. During the trip I walked every aisle of the show, passing by every vendor's booth. It is a good way to burn off some Chicago deep dish pizza, but also a wonderful way to discover that vendor you never heard of and some very interesting hardware and software.

This approach ensured I got answers to the questions I had

going into the show and provided me with the opportunity to discover new products and solutions. For example, I stopped at the QualiChem booth and was discussing what I did and did not need to worry about with respect to water quality for mixing coolant, when an engineer mentioned the NexJen coolant separator. After further digging into that solution, I purchased the NexJen separator with my mill and have been very pleased with it.

I also stopped by measurement equipment vendors to explore various options. I was not looking at digital height gauges,



but it became clear I could get a lot of value out a digital height gauge. It can yield high accuracy measurements with very low setup time. It is not the right solution for many situations, but where it does apply, it frequently yields very repeatable and accurate measurements with limited setup.

After the trip, I was confident that the Okuma M560v VMC with a Koma TWA160 dual axis rotary table was the right configuration for the type of work I was focusing on. A couple of months after the show, I finalized the deal and purchased the system. Now more than a year later, I am still very pleased with the choice. Every solution has its positives and negatives, but this has been a rock-solid, reliable solution.

The investment of my time and money in the IMTS trip was very much worth it.

“DURING THE TRIP, I WALKED EVERY AISLE OF THE SHOW, PASSING BY EVERY VENDOR'S BOOTH. IT IS A GOOD WAY TO BURN OFF SOME CHICAGO DEEP DISH PIZZA, BUT ALSO A WONDERFUL WAY TO DISCOVER THAT VENDOR YOU NEVER HEARD OF AND SOME VERY INTERESTING HARDWARE AND SOFTWARE.”



WEDNESDAY
SEPTEMBER 16, 2026
11:00AM - 1:00PM

IMTS2026
TECHNOLOGY
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Join NTMA and industry leaders for an insightful lunch and the latest innovations shaping the future of manufacturing.

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AI IS NOT A TOOL. IT'S A TRANSFORMATION.

By DELCIE BEAN, FOUNDER & CEO, PARAGUS



Let me tell you about two hand drill companies.

It's the late 1800s, and you run the successful one.

Business is booming, your product leads the market and your only real problem is keeping up with demand. Then electricity arrives, and you see it instantly for what it is: the fix for your bottleneck. No more oil lamps, no more factory fires and now you can run a second shift. You are thrilled.

Meanwhile, a guy you fired for tinkering instead of producing looks at that same electricity and sees something completely different. He doesn't use it to make your drill faster. He uses it to reinvent the drill, and he builds the first electric one. I don't need to tell you which company is still around.

SO WHY THE HISTORY LESSON?

Because most organizations today are treating AI exactly like that first company treated electricity. They buy everyone a subscription, fund a pilot, send out a policy and run a workshop on responsible use. From the inside, it genuinely feels like progress. You are taking action. You are spending

money. But look at the big stuff: how decisions get made, how work gets executed, how you measure a productive day. If none of that has shifted, it is still business as usual, and business as usual is not a transformation.

That is the whole point. AI is not a tool you bolt onto the shop you already run. The tools and the monthly subscriptions are the easy part (and the cheap part), and they are not where the advantage lives. The advantage lives in rethinking the work itself.

WHY DOES THIS MATTER SO MUCH FOR A PRECISION SHOP?

Because labor has always been your hardest constraint. Skilled machinists are expensive, hard to find and harder to keep, and most of you have spent years fighting that battle. For the first time, that constraint is starting to loosen. Digital labor is heading toward near-zero cost over the coming decades, and physical automation is closing in fast (Boston Dynamics and Tesla are both pushing humanoid robots toward production this year).

Here is the question I want you to sit with: if skilled labor were no longer your limiting factor, what would you build? And here is the part that should excite the smaller shop most;

for most of history, the big player won on resources. When capacity becomes something you design instead of something you fight for, the underdog suddenly gets to play a very different game.

SO WHERE DO YOU START?

Not with the flashy agents and dashboards. You start with a foundation, and we have found it comes down to three things: leadership, strategy and governance.

Leadership has to change first. For your whole career, you have led by having the answers and by studying the past to predict what comes next. The pace of change is making the past a weaker guide, and your team is about to have access to far more expertise than any one owner can hold. Your job shifts from giving the answers to asking sharper questions.

Strategy has to be deliberate. The shops you read about in the "90% of AI projects fail" headlines are almost always the ones sprinting with no plan. The real work right now is less glamorous: getting genuine buy-in at the top, treating the years of data you have already collected as the raw asset it is and expecting a few failures instead of quitting at the first wrong answer.

Governance keeps it safe. Sort your data so your policy is not so locked down that nobody can do anything useful, tell your people clearly when to disclose AI use and keep the whole thing flexible enough to move at the speed this technology moves.

None of this is the exciting part. The exciting part (building agents, watching the busywork disappear) comes later, and it is worth the wait. But skip the foundation, and you tend to become one of those failure statistics.

One last thing: this is not about pushing people out. I run a 100% employee-owned company, and I believe deeply that our people are the point. This is about freeing them to do work that actually matters.

This is a marathon, not a sprint. I will be going much deeper at NTMA Engage in Las Vegas this November. If your shop is ready to treat AI as more than a line item, come find me. Let's keep the conversation going there.

HOW REATA TURNED REAL-TIME DATA INTO MEASURABLE MANUFACTURING GAINS

EMBER DAVIS, PRODUCT MARKETING MANAGER, DATANOMIX

For decades, manufacturers have accepted a gap between what the business plans and what actually happens on the shop floor. Schedules drift. Utilization gets estimated. Late jobs are discovered too late to fix.

At Reata Engineering & Machine Works, that gap was closed intentionally.

Founded more than 30 years ago, Reata Engineering, based in Englewood, Colorado, has built its reputation by taking on complex, high-precision work that demands more than standard machining. The company's identity is rooted in engineering expertise, advanced CNC capabilities and a process designed around collaboration and continuous improvement. In recent years, that same mindset was applied to how data moves through the organization.

The result was a connected manufacturing environment that delivered measurable improvements in uptime, utilization and return on investment.

ENGINEERING FIRST, TECHNOLOGY EVERYWHERE

Reata's approach to manufacturing starts long before a machine is powered on. Its process emphasizes engineering-led collaboration, design for manufacturability and early validation to reduce risk and rework later in production. That foundation makes Reata well-suited for complex parts, tight tolerances and demanding customer requirements.

But as the shop grew, one challenge became clear. While the engineering process was highly refined, production visibility lagged behind. Key questions were more challenging to answer than they should have been:

- Are machines running as planned?
- Is utilization matching the quoted assumptions?
- Which jobs are trending late, and why?

Answering those questions required

too much manual effort and too much guesswork.

Reata decided to extend its engineering philosophy to production data.

CLOSING THE LOOP BETWEEN PLAN AND REALITY

Rather than adding another reporting layer, Reata focused on connecting systems that already held critical information. By implementing Datanomix Production Monitoring, real-time machine data is directly integrated into production planning and scheduling workflows, creating a closed loop between what was planned and what was actually happening on the floor.

"What it's really done for us has given us clarity, has given us confidence in the things that we are doing and we know that we're doing them right," said Adam Zaouague, automation & data specialist at Reata Engineering.

This approach gave engineers, operators and project managers a shared, real-time

view of performance. Schedules were no longer static. Capacity decisions were grounded in actual machine behavior. Issues surfaced early enough to be corrected.

The goal was not more dashboards. It was confidence that:

- quoted cycle times reflected reality
- schedules could be trusted
- decisions were backed by live data

BRINGING ERP, ENGINEERING AND THE SHOP FLOOR INTO ONE SYSTEM

Real-time machine data alone doesn't solve scheduling, quoting or delivery challenges. At Reata, the real breakthrough came from connecting Datanomix's shop-floor performance data to Fulcrum to enable more accurate planning and execution.

By integrating ERP data with live production signals, Reata aligned three critical layers of the operation:

- ERP for jobs, routings, due dates and customer commitments
- Engineering for expected cycle times and process assumptions
- Shop floor execution for actual machine performance

This connection eliminated manual data entry and closed the gap between what was planned in the system and what machines were actually delivering. Job status, progress and completion were no longer based on estimates or lagging updates. They were driven by real production activity.

With ERP and machine data synchronized, Reata could see downstream impacts earlier. If a job began drifting off plan, the team had time to adjust schedules, reallocate capacity or communicate proactively. On-time delivery became a managed outcome rather than a hopeful target.

The result was not just better

reporting, but faster, more confident decision-making across engineering, operations and customer-facing teams.

RESULTS AT A GLANCE

Once the connected environment was in place and adopted across the team, Reata saw rapid, measurable improvement.

Performance Impact:

- 27% increase in uptime
- 28% increase in machine utilization
- 10% reduction in common waste

Annual Gains Per Machine:

- 204 additional productive hours
- \$16,308 in recovered productivity
- 7x return on investment

These gains were achieved without adding machines or headcount. They came from better visibility, faster decision-making and tighter alignment between engineering intent and shop-floor execution.

WHY THE APPROACH WORKED

Two factors made the difference.

First, Reata's engineering culture and Datanomix's Kick-Ass Coaching accelerated adoption. Engineers were already accustomed to validating assumptions and refining processes. Applying that same rigor to production data felt natural rather than disruptive.

Second, real-time visibility changed behavior. Operators began competing against planned cycle times. Engineers refined programs based on actual performance. Project managers intervened earlier when jobs drifted off plan. On-time delivery stopped being an abstract KPI and became something individual machines and teams could influence.

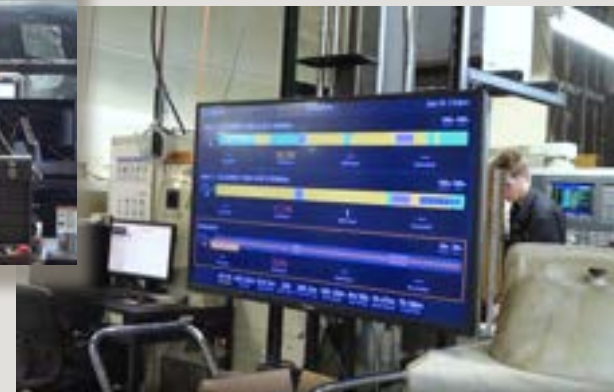
A MODERN BLUEPRINT FOR MANUFACTURING PERFORMANCE

Reata's experience highlights a shift happening across the industry. Competitive advantage is no longer defined solely by equipment or labor. It comes down to how effectively manufacturers integrate engineering, production and data into a single operational system.

For manufacturers looking to improve throughput, predictability and profitability, the takeaway is straightforward. The data already exists on the shop floor. The value comes from making it usable, visible and actionable.

For Reata, that shift turned visibility into results and technology into a measurable return.

To learn more about how real-time production data supports connected manufacturing environments, visit Datanomix.io.





BUILDING ADAPTABLE MORE AUTOMATION:

How Robotics Is Evolving for a

New Era of Manufacturing

GEOFF DAWSON, DIRECTOR OF SALES AT FANUC AMERICA CORPORATION



Manufacturers today face a production landscape defined by rapid change. Product lifecycles are shrinking, part variability is increasing and changeovers that once happened quarterly now occur weekly, or even daily. In this environment, the traditional model of fixed, rigid automation simply doesn't provide the flexibility companies need to stay competitive. That's why adaptability has become one of the most important attributes in modern robotic systems.

Across industries, we're seeing customers demand automation that can be reconfigured quickly without lengthy reprogramming or downtime. Fortunately, advances in programming tools are making this not only possible but increasingly simple. Offline simulation, graphical interfaces and template-based programming have dramatically reduced the time required to adjust robot tasks. Updates that once took hours using traditional line-by-line teach pendant programming can now be completed much faster and often without stopping production. As AI-enhanced tools continue to mature, changeovers will become even quicker and more intuitive.

At the same time, automation is becoming more accessible than ever for machine shops of all sizes. In the past, many manufacturers viewed robotics as a significant capital investment reserved for high-volume production environments. Today, pre-engineered automation systems have changed that equation. Designed to deliver efficiency gains through cycle time reduction, increased throughput and improved process consistency, these solutions help manufacturers enhance part quality while reducing implementation complexity.

Perhaps most importantly, pre-engineered automation is well suited for today's high-mix, low-volume manufacturing environment. These systems are scalable, highly reliable and designed to adapt as production needs evolve. Rather than replacing workers, they help remove employees from the dull, dangerous and dirty tasks that often create staffing challenges. This allows skilled personnel to take on higher-value roles managing manufacturing cells, optimizing

processes and overseeing automated operations.

For many shops, the best automation strategy starts small. A pre-engineered collaborative robot, or cobot, can provide an accessible entry point into automation by focusing on common part families and a single process such as machine loading and unloading. Once those benefits are realized, additional operations including deburring, inspection and assembly can be added modularly to expand the value of the automation investment.

Mechanical flexibility is advancing as well. Many robotic workcells now leverage automatic tool changers with standardized mechanical and electrical interfaces, allowing operators to switch between end-of-arm tools in minutes. Modular gripper systems, ranging from interchangeable fingers to vacuum modules and servo-driven mechanisms, make it easier to handle a wider range of parts without complex redesigns or calibration work.

Robots themselves are evolving to support greater adaptability. Machines today feature deeper integration of sensing technologies, including force and torque sensors that allow robots to "feel" contact and adjust accordingly. FANUC's force-sensing capabilities, for example, enable more forgiving and precise motion during assembly, polishing and other processes that involve part variability. Likewise, embedded vision systems directly connected to the robot controller provide fast, reliable part detection even when orientations or environmental conditions shift.

Collaborative robots play an increasingly important role in making this level of adaptability available to a broader range of manufacturers. Cells built around the FANUC CRX collaborative robot, for example, can be easily integrated with FANUC CNC-controlled machines through the Robot Onsite option, as well as with other CNC platforms using standard Ethernet-based communication protocols. Designed around

simplicity, CRX cobots provide manufacturers with an easy entry into robotics through straightforward installation, intuitive programming and simple redeployment. Combined with a growing ecosystem of pre-engineered "Cobot and Go" style solutions, manufacturers can implement automation more quickly and with less risk than traditional custom-engineered systems.

Artificial intelligence is adding yet another layer of responsiveness. By interpreting sensory data in real time, AI helps robots adapt to material differences, part tolerances and unexpected process conditions. When manual adjustments are required, AI-enabled systems can learn from those interventions and apply the corrections in future cycles. This capability is particularly valuable in environments where product mix and customer requirements are constantly changing.

At FANUC, improving flexibility is central to our development strategy. We're expanding integrated sensing and simulation tools that help customers validate changes virtually before deploying them on the shop floor. We're investing in open platforms, including ROS 2 connectivity, Python support and enhanced streaming motion, to give developers more freedom to build adaptive solutions. And through our work with NVIDIA on real-time AI perception, we're helping customers leverage digital twins and advanced reasoning to accelerate changeovers and optimize production.

As manufacturing continues to evolve, so must automation. The future of robotics isn't just about faster cycle times or greater output. It's about creating flexible, scalable systems that manufacturers of every size can deploy and adapt as business conditions change. By combining accessibility, sensing, intelligence and open architectures, we're enabling robots that can adjust, respond and redeploy with unprecedented ease, helping manufacturers drive productivity no matter how quickly their operations evolve.

JOINT TECHNOLOGY SUMMIT 2026

LINDA WARNER, EXECUTIVE & MEMBERSHIP SUPPORT, TECH TEAM LIAISON

What happens when manufacturing leaders come together to share ideas, explore emerging technologies and learn from one another? The answer was on full display at the 2026 Joint Technology Summit, where members of NTMA, AMT and MPMA gathered June 11–12, 2026, at The Manufacturing Advocacy and Growth Network (MAGNET) in Cleveland, Ohio.

Centered around the theme, “Turning Promise into Productivity: Bridging the Technology Adoption Gap,” this year’s Summit brought together 26 attendees for two days of collaboration, conversation and practical insights focused on helping manufacturers navigate today’s rapidly evolving technology landscape.

The event kicked off with welcoming remarks from Roger Atkins, president of NTMA, and Mary Ellen Doran of MPMA. Attendees then gained valuable insight into workforce development initiatives during a presentation by Monica Lawson, senior manager and co-lead at MAGNET. Lawson highlighted programs such as Early College Early Career, ACCESS, Coach U and the MAGNET Experience Center for Students — innovative pathways designed to connect individuals with rewarding careers in manufacturing and strengthen the industry’s future workforce.

Cybersecurity and compliance took center stage next as Derrick Phillips, lead CMMC certified assessor and founder of Aspire Cyber, shared critical information regarding upcoming 2026 compliance deadlines. His presentation provided attendees with a practical understanding

of mandatory third-party assessments launching in November 2026, common compliance gaps within manufacturing environments and strategies for responsibly leveraging AI technologies while maintaining CMMC certification requirements.

Beyond the presentations, one of the Summit’s greatest strengths was the opportunity for members to connect with peers facing similar challenges and opportunities. The day concluded with a roundtable discussion that sparked meaningful conversations and the exchange of real-world experiences, followed by an evening reception at Goldhorn Brewery where networking continued in a relaxed setting.

Day Two began with an engaging fireside chat featuring Russ Waddell of AMT and Jamie Goettler of BTX Precision. Drawing from decades of industry experience, the discussion explored practical approaches to technology adoption, offering valuable lessons from both the supplier and manufacturer perspectives. Attendees appreciated the candid conversation about what works, what doesn’t and how manufacturers can make smarter technology investments that deliver measurable results.

The group then toured the MAGNET facility, led by CFO Daniel Jacoby, providing a firsthand look at the organization’s efforts to support manufacturing growth and innovation throughout the region.



The Summit concluded with a thought-provoking presentation, “Digital Twin: Fact vs. Fiction,” delivered by Daniel Vitullo of Siemens. The session challenged attendees to separate hype from reality and better understand how digital twin technologies can create tangible value within manufacturing operations.

As in previous years, the Joint Technology Summit reinforced the value of collaboration across industry associations. By bringing together manufacturers, technology experts and industry leaders, the event provided attendees with actionable ideas, new connections and fresh perspectives they can take back to their organizations.

Planning is already underway for the 2027 Joint Technology Summit, and we look forward to continuing the conversations that help manufacturers learn, adapt and thrive.

For additional information on the technologies discussed during the Summit, contact Linda Warner at NTMA or Mary Ellen Doran at MPMA.

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CHAPTER CHECK-IN

WESTERN MASS MEMBERSHIP MEETING

ANGIE BEAVIS, EXECUTIVE DIRECTOR, WESTERN MA CHAPTER NTMA

Thanks to all who attended our May WMNTMA Membership Meeting hosted by the Joseph Freedman Company. Special thanks to John Freedman for welcoming us, organizing insightful tours of the JFC facility and giving us a closer look at the recycling industry from a manufacturer’s perspective. We are also grateful to Guy Dalton and Brian Morrill for sharing their expertise on environmental matters — their insights added a great value.

We extend our thanks to Michael Lagomarsino with our NTMA partner Grainger and Matt Lyman of Stanley Black & Decker for joining us, generously providing lunch for attendees and showing support for our local chapter.



We are very grateful to Eric Hagopian, current NTMA Chairman and WMNTMA member, for making time in his demanding schedule to attend and share valuable updates regarding NTMA. His dedication and ongoing contributions enhance our chapter, and we deeply appreciate his continued commitment. Congratulations to Pilot Precision Products for earning a 2025 NTMA Safety Award.

A special congratulations goes out to Jack Mitchell of Mitchell Machine, who celebrates an impressive 80 years of WMNTMA membership and has earned the 2025 NTMA Safety Award. Jack’s support for our chapter is greatly appreciated, and this recognition is well deserved.



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IN MEMORY OF KENNETH KUHN



Kenneth P. Kuhn, 69, of Meadville, Pa., passed away July 12, 2026, at his residence. Ken was a 1974 graduate of Meadville High School and the tool and die program at the Vo-Tech. He completed his apprenticeship at Kuhn Tool & Die Co., where he became a journeyman

toolmaker. Alongside his wife, Bonnie, Ken proudly served as the second-generation owner and operator of Kuhn Tool & Die Co., continuing the family business with pride and dedication. He had the foresight to make two of his sons partners in the business, ensuring it would continue into the third generation. In this role, Ken oversaw years of growth, expanding the company into a more than 41,000-square-foot manufacturing facility. He was an advocate for and supporter of local economic development and served as a respected voice in the manufacturing sector. Under his leadership, the company provided stable manufacturing jobs in Meadville and was recognized with the Pennsylvania Governor's Impact Award for Small Business in the Northwest Region for innovation, growth and job creation. He was a member of BPOE Elks Lodge No. 219 and the Meadville Country Club, and served as past president of the

NWPA-NTMA. He was also a member of the Meadville Medical Center Board of Corporators, past vice president of the Active Aging Foundation, and current vice president of the Active Aging Board. Ken enjoyed skiing, biking, candle making, stained-glass making, golfing, playing the organ, gardening, riding his tractor, tending his land, and was an avid Scotch connoisseur. Above all, Ken cherished the time he spent with Bonnie, his wife of 40 years, and his family. He especially loved watching his grandchildren play sports and never missed an opportunity to cheer them on from the sidelines. He is survived by his wife, one daughter, three sons, and 13 grandchildren, as well as three sisters, one brother, and many nieces and nephews. In lieu of flowers, memorial contributions may be made to the NWPA-NTMA Education Foundation, P.O. Box 203, Meadville, PA 16335.

NAM, JERGENS: TAX LAW BRINGS PROSPERITY TO MANUFACTURERS

CONTRIBUTED BY THE NATIONAL ASSOCIATION OF MANUFACTURERS

NAM Managing Vice President of Policy Charles Crain and Jergens President and CEO Jack Schron testified in June before the House Oversight and Government Reform Committee about the importance of H.R. 1, last year's tax legislation that secured competitive tax policy for the industry and all Americans.

WHY IT MATTERS: Crain began by outlining the stakes involved in the legislation's passage, saying, "Just a year ago, manufacturers were facing the prospect of devastating tax increases across the industry. Pro-growth and pro-investment incentives had already expired, and taxes were scheduled to go up even more on essentially everyone at the end of 2025."

"Thankfully, Congress and the administration — with manufacturers by your side — took action. H.R. 1 was signed into law by President Trump on July 4, America's 249th birthday," he continued.

"Now, as we approach the 250th anniversary of America just a month from today, manufacturers are using the tax law to invest more, to innovate more, to hire more and grow right here in the United States."

MANUFACTURERS' STORIES: "At the NAM, we hear about the real-world impact of these provisions every single day," Crain told legislators.

"A family-owned business in North Carolina was able to purchase multiple pieces of capital equipment that they

had been holding back on and hire five new people as a result. A helicopter company could do more R&D to detect forest fires, while a tool company increased its workforce by more than 10% because it could afford new debt-financed investments."

A MANUFACTURER IN D.C.: Crain was joined by Schron, whose family-owned firm in Cleveland, Ohio, was founded in 1942. "Jergens was building parts and equipment for the aerospace and defense industries to defend ourselves in the Second World War," Schron told the committee. "Today we have 450 employees that supply manufacturers around the world and across industries, including machining, metalworking, aerospace and defense."

"The law has made our research investments, our equipment purchases, our facilities expansions and our upgrades through the financing more affordable," he said.

A range of benefits: Schron highlighted several provisions in H.R. 1, including the no tax on overtime provision.

The overtime provision allows employees to benefit more from working more hours, while the company also profits. Manufacturers are having trouble filling jobs due to the shortage of skilled labor, and the overtime provision means that existing employees are eager to work extra hours. "Eighty-three percent of our hourly skilled workforce is volunteering to work overtime," said Schron.

Meanwhile, the new full expensing for factories provision is enabling the company to start on another facility expansion, while the law's estate tax provision will help the business stay in the Jergens family.

THE LAST WORD: "Alexander Hamilton said that the wealth, the independence, the very security of our nation are materially connected with the prosperity of manufacturers," Crain said. "Today that manufacturing prosperity depends on tax policy that empowers our industry to invest, to innovate and to grow. H.R. 1 is helping manufacturers deliver on Hamilton's promise."



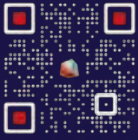


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Practical Solutions For Job Shops at IMTS 2026

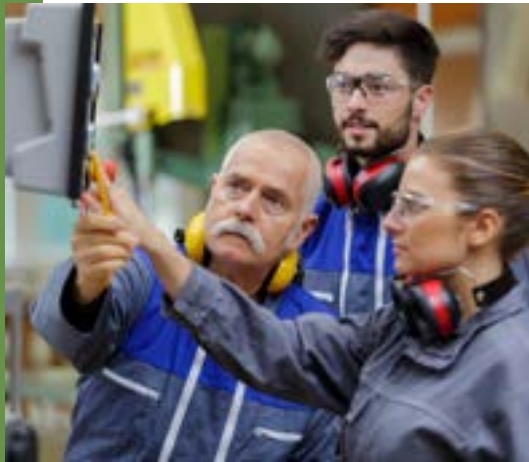
This half-day workshop brings job shop professionals together for dynamic sessions, designed for manufacturing job shops, exploring automation, AI, and the future of manufacturing. Attendees will dive into practical, shop-ready technologies, share common challenges, and engage in candid discussions with peers and industry thought leaders.

**SCAN TO LEARN MORE**



MANUFACTURING DAY:

JENNY STUPICA, WORKFORCE DEVELOPMENT DIRECTOR, NTMA



Every October, manufacturers across the country have an opportunity to do something that can make a real difference in the future of our industry: open our doors and show people what modern manufacturing is really about.

For those of us who work in manufacturing every day, we know there are misconceptions about our industry. Many people still picture dark, dirty factories and jobs that haven't changed in decades. But that isn't today's manufacturing industry. Today's shops are filled with advanced technology, automation, robotics, CNC equipment and highly skilled people who use math, science, technology and problem-solving skills every day.

Manufacturing Day, celebrated nationally on the first Friday of October with events continuing throughout the month, gives manufacturers a chance to help change that perception. It is a way to introduce students, parents, educators

and members of our communities to what modern manufacturing really looks like and, just as importantly, help them see themselves as part of it.

The need to tell that story has never been greater. According to the National Association of Manufacturers, manufacturing supports more than 13 million jobs in the United States, while the Manufacturing Institute estimates that the industry will need to fill millions of high-skill, high-tech and high-paying positions over the next decade. For companies in the precision machining and tooling industries, that workforce challenge is one we understand all too well.

MFG Day gives us a chance to introduce people to the incredible range of careers available in manufacturing. Today's shop floor is a place where technology, advanced equipment, automation, engineering, programming and problem-solving come together. There are opportunities for machinists, CNC programmers, engineers, quality professionals, maintenance technicians, designers, business leaders and many others. Manufacturing careers are not limited by one particular educational path, background or experience. There is a place for anyone who is willing to learn, work hard and build something meaningful.



Workforce WINS

An Open Door to the Future of Our Industry

Many manufacturers already participate by hosting facility tours, inviting students and teachers to see their operations, demonstrating equipment, offering hands-on activities, speaking at schools, participating in career fairs or partnering with local workforce organizations. Others use MFG Day as a way to showcase employees and share their career stories through social media.

If your company has never participated, don't feel like you need to plan a major production. Start small. Invite a local school for a tour. Partner with another NTMA member. Host a classroom visit or career

conversation. Connect with a technical school, community college or workforce development organization. The Manufacturing Institute provides resources to help companies plan successful events, and MFG Day offers a platform to connect individual efforts to a national movement.

Every open door is a chance to change someone's perception of manufacturing and perhaps inspire the next great machinist, engineer, programmer or leader. This October, let's make sure the next generation knows that there is a place for them in our industry.



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American Precision Museum

CELEBRATES COMPLETION OF \$2.8 MILLION “FLOOR 2 THE FUTURE” FUNDRAISING CAMPAIGN

Located in Windsor, Vermont, the American Precision Museum (APM) is housed in the historic Robbins & Lawrence Armory, the birthplace of precision manufacturing and the machine tool industry. It preserves and interprets this landmark site and the innovations, people and technologies that shaped — and continue to influence — modern industry. This May, the APM proudly announced the successful completion of its \$2.8 million “Floor 2 The Future” fundraising campaign, a transformative initiative that will reclaim and renovate the museum’s second floor, enhancing its capacity for education, collaboration and community engagement.

The campaign supports the renovation and activation of the museum’s second floor for a range of uses, including educational programming, place for creativity and hands-on making and a conference center for community and corporate events. This project will increase APM’s usable space by 45% within its existing building.

“Reaching this milestone is an investment not just in our

building, but also in the future of American manufacturing education and inspiring the next generation to consider careers in manufacturing,” said Steve Dalessio, executive director of the American Precision Museum. “Floor 2 The Future allows us to bring more of our collection to life while creating new opportunities for learning, collaboration and innovation.”

Lee Morris, chairman of the board, added, “This campaign reflects a shared vision among our supporters — one that honors the past while building a strong foundation for the future. We are grateful to the many donors and partners who made this possible.”

The reclaimed second floor will enable APM to further its mission of inspiring a new generation while preserving the history of manufacturing and the machine tool industry, fostering partnerships with corporate members and community organizations. It will also strengthen the museum’s growing STEM+M Education Kit program, which partners with schools to provide hands-on learning



experiences in science, technology, engineering, mathematics and manufacturing. The new space will allow APM to expand this initiative, develop new curriculum and serve more students and educators through interactive, skills-based programming.

The Floor 2 The Future fundraising campaign and the Gene Haas Center for Manufacturing Inspiration it has funded, positions APM to:



- Inspire the next generation of manufacturers and innovators through hands-on learning experiences
- Provide a dedicated meeting and event space for the local community and corporate partners
- Continue telling the vital story of American manufacturing and its impact on modern industry

Construction on the Gene Haas Center for Manufacturing Inspiration has already begun and is expected to continue through December 2026, with a public opening to follow.

For more information about the American Precision Museum and its programs, please visit:

www.americanprecision.org or contact Dave Eastman, director of development and communications at: deastman@americanprecision.org or (802) 369-9285



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Parnter News

MEET THE 2025 SERVICE AWARD WINNERS

2026 Nominations are open for all four Service Awards until August 31st

LINDA WARNER, EXECUTIVE & MEMBERSHIP SUPPORT, TECH TEAM LIAISON

NTMA would like you to meet the 2025 Service Award winners who were acknowledged at the Awards and Conference Kickoff at Engage 2025 in Detroit, Michigan.

Do you know a deserving member or non-regular member that deserves to be nominated? The Nominating Team will be accepting nominations for all four awards until Aug. 31, 2026.

This year, award recipients will be announced at Engage 2026 in Las Vegas, Nevada.

We cannot wait to see you there to help us congratulate them.

L.A. Sommer Memorial Award

FOR OUTSTANDING AND CONTINUING SERVICE OF THE HIGHEST MAGNITUDE

BONNIE KUHN

Kuhn Tool & Die Co.

Bonnie is Vice President of Kuhn Tool & Die Co. which is owned by her husband Ken Kuhn and located in Meadville, Pennsylvania. She has worked for the company for over 30 years and has been an active member of NTMA since 1991. She has served on several NTMA standing teams and accepted the role of Vice Chairperson of the Board 2023-2024. Bonnie was then elected by the Executive Committee to serve as NTMA's first woman Chairperson in 2025.

Bonnie Kuhn's contributions to the tooling and machining industry have included her leadership, community-building and organizational achievements. Through her roles at the chapter and national levels, Bonnie has fostered collaboration across manufacturers, promoting the sharing of operational best practices — for example,

how to manage healthcare costs, workforce retention and productivity improvements, often referred to as taking home a "golden nugget" from NTMA events. Community-minded and inclusive, she often describes her extended network as an NTMA "family."



NTMA News

Distinguished Service Award

FOR OUTSTANDING SERVICE TO THE INDUSTRY BY
OTHER THAN NTMA MEMBER COMPANY REPRESENTATIVES

SCOTT COVERT

Penn United Technologies - Retired

Scott served as an NTMF Board Member 2024-2026 and on the WFD Team from 2024-2026.

He co-created the NTMA Pre-Apprenticeship Program, including writing the textbook. The Pre-Apprenticeship Program is designed to be used in a high school curriculum and with successful completion, the student can earn credentials toward high school graduation as well as the completion of the first year of the NTMA-U 3-year registered apprenticeship program. This program has also been articulated for college credits at the University of Akron and could be articulated at other higher education institutions. Scott wrote 3 additional textbooks for the full 3-year apprenticeship program, plus an optional fourth year. In addition, Scott developed NTMA-U mini-courses that can be used for students and teachers as well as in Onboarding activities for new hires. This work was done on Scott's own initiative and he has shared it freely with NTMA, asking for nothing in return.

In 2024, NTMA embarked on a major upgrade of the interface and delivery of NTMA-U content. Scott has been instrumental in that project's success by contributing hundreds of hours to review every minute of the NTMA-U content. Scott has reviewed every storyboard and video to ensure technical accuracy, visual clarity and consistency in written and spoken terminology. He has suggested alternate ways to deliver content when the original format was unusable or no longer available, always making sure the course content and objectives were preserved. His expertise was critical to the success of the project.



NOMINATIONS FOR ALL FOUR SERVICE AWARDS
ARE OPEN NOW.

PLEASE SEE DETAILS ON PAGE 35.

*THE HONOR AWARD AND WILLIAM E. HARDMAN AWARD FOR EXCELLENCE IN TRAINING WERE
NOT AWARDED IN 2025.

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Apply or Renew Now!

NTMA 6S Excellence Award

PURPOSE:

To improve the perception of American manufacturing by promoting and recognizing excellence in member shop organization and efficiency.

HOW IT WORKS:

NTMA companies apply for the award by submitting a self-assessment based on criteria that demonstrate best-in-class practice in the six S's:

- 1. Safety | 2. Sort | 3. Set in Order
4. Shine | 5. Standardize | 6. Sustain**

Certificates are awarded every year for the first five years based on self-assessments submitted. Once the recipients receive five certificates, they are also presented with a trophy.

SUBMISSIONS:

For an application and forms, please contact Linda Warner at lwerner@ntma.org or 216-264-2824. Please submit your application by Tuesday, September 15th, 2026, to be considered.

Completed applications should be sent to 6Saward@ntma.org



This year each company qualifying for the NTMA 6S Excellence Award will be entered into a drawing to win custom Kaizen Shadow Foam from Kaiser Manufacturing, valued at \$1,500.

Kaizen Shadow Foam® is the perfect enhancement to any 6S program. It creates an intuitive, visual workspace, keeps track of tools and gauges, and ensures every item is properly stored. By reducing the time operators spend searching for tools, it streamlines workflows and minimizes equipment replacement costs for companies.

The two-color foam is professional-grade tool storage material. It is very durable, will not absorb moisture, oils or solvents, and can be cleaned. It will last for years even in tough industrial environments.

One winner will be selected at random from qualifying companies at the Engage Conference in Las Vegas, Nevada, November 10-13, 2026. The winner will receive:

- 1. Free Photo Scan It kit including scanning mat, precision targets and instructions for capturing tool layouts.**
- 2. Minimum \$1,500 in custom, two-color Kaizen Shadow Foam (approximately 10 drawers, depending on size). Choice of charcoal over red, blue or yellow foam.**
- 3. Laser engraving of company logo and/or pocket labels as needed.**
- 4. Copies of all tool layout CAD files at the end of the project.**

Terms: Project must be completed by February 28, 2027. Recipient is responsible for all shipping costs for the finished product from Kaiser Manufacturing. Recipient agrees Kaiser Manufacturing is authorized to photograph finished Shadow Foam, excluding any proprietary parts, and use images and company name for marketing purposes.



NTMA SERVICE AWARDS 2026 NOW ACCEPTING NOMINATIONS

The Service Awards are given out each year at the Manufacturing Engage Conference. We need your help finding the best candidates for these awards.

Award categories are:

MEMBER AWARDS

HONOR AWARD

For continuing meritorious service and dedication to the Industry and/or Association by an NTMA Regular Member. Traditionally rendered for longevity of service and/or dedication, as opposed to a single act of service in a short-time Industry or Association position.

L.A. SOMMER MEMORIAL AWARD

For outstanding and continuing service of the highest magnitude by an NTMA Regular Member. Emphasis is placed on service to the Association, both of the highest order over a period of time, demonstrating excellence in a particular role in NTMA, rather than as a participant in a single event.

WILLIAM E. HARDMAN AWARD FOR EXCELLENCE IN TRAINING

For a company or individual of Regular, National Associate, or Education member status of NTMA that has consistently demonstrated strong support and active participation in "structured training" for the precision custom manufacturing industry.

NON-MEMBER AWARD

DISTINGUISHED SERVICE AWARD

For outstanding service to the Industry and/or Association by a Non-NTMA Regular Member Company Representative.

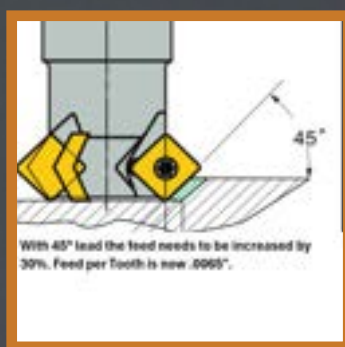
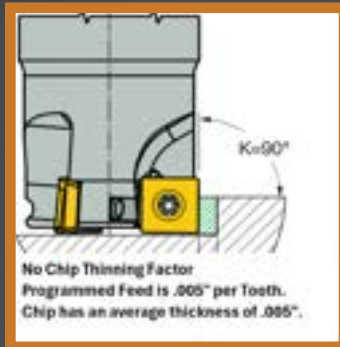
ELIGIBILITY RULES & REQUIREMENTS

1. If honoree has previously received the LA Sommer Award, he/she is not eligible to receive the Honor Award or William E. Hardman Award.
2. If honoree has previously received the Honor Award and/or the William E. Hardman Award, he/she is eligible to receive the LA Sommer Award.
3. All Award nominees must be currently active in their company and/or industry, or active in the Association as a Past Service Member.
4. If no candidates are nominated for any of these awards, the particular award in question will not be presented in that given year.
5. Nominators cannot nominate the same person for multiple awards, but can nominate multiple persons for multiple awards.

Help us recognize deserving individuals and/or companies that have supported and advanced the industry and the Association.

**Submit your nomination(s) by Monday, August 31st, 2026.
Scan the code or contact Linda Warner at lwerner@ntma.org
for a nomination form.**





PUSH FEED RATES

without killing tool life

What if you could increase feed rates, remove more material and still extend tool life? That's exactly what chip thinning and high-feed machining are designed to do-when applied correctly.

High-Feed tools are built for light depths of cut at extremely high feed rates. Their positive geometry reduces horsepower demand while still delivering strong material removal, resulting in a faster, more efficient process.

The key is chip thinning.

A 90° Square Shoulder Mill (Fig 1) does not have any chip thinning applied. However, as the lead angle moves away from 90° to 45° (Fig 2), a thinner chip is produced and less horsepower is required to take that cut. A 30% increase in feed needs to be applied to this tool so the carbide is cutting and not rubbing the material. If a carbide tool is rubbing, it is generating the wrong type of heat. The tool will fail quickly if the feed is not increased.

High-Feed tools use this Chip Thinning concept and have lead angles between 10° and 25° (Fig 3, Avg 17°).

The math shows us when using these High-Feed Tools, their feed increases can be as much as 2.5 to 6 times the normal Square Shoulder 90° Tool's feed rate.

The trade off for the speed is the depth of cut. Manufacturers of these tools are VERY specific on the max depth of cut. Do not exceed that depth of cut. Depending on the design and size of the insert, you will typically see depth of cut ranges in the .030" to .040" range.

That small depth of cut isn't as exciting as the feed increases, but once you measure the performance of these tools by metal removal rate you will see just how impressively effective these High-Feed tools can be for you.

The result? Faster cycle times, longer tool life and lower cost per part.

At PTSolutions, we help customers turn these strategies into real performance gains on the shop floor.



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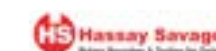
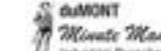
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