

THE RECORD

Published by the National Tooling and Machining Association

INSIDE THIS ISSUE

Inspire and Engage the Future Workforce
With MFG Day Events pp 24-25

An Opportunity to Recruit and Retain
Your Workforce pp 28-29

and so much more ...

MFG

DAY

OCTOBER 7, 2022

THE PRECISION MANUFACTURING CONFERENCE

ENGAGE 2022

POWERED BY 

October 25 - 28, 2022 - Kansas City, MO

More information on pages 32-33



NATIONAL TOOLING AND MACHINING ASSOCIATION

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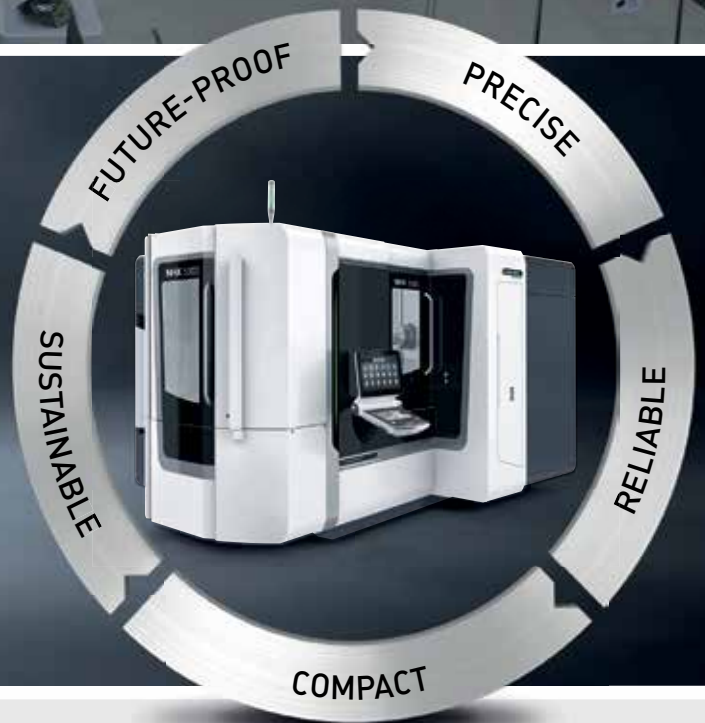
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THE RECORD

OPERATIONS & EDITORIAL

Roger Atkins, President
Doug DeRose, Editor
Rena Montedoro, Editor

ADVERTISING INQUIRIES

To advertise in The Record, or for information on publishing your corporate newsletter or sales literature, contact Linda Warner at (216) 264-2837 or via email at lwarner@ntma.org for advertising and editorial content.

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Upcoming NTMA National Events



IMTS2022

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IMTS 2022

Monday, September 12 – Saturday, September 17
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MFG Day

October 7

THE PRECISION MANUFACTURING CONFERENCE

ENGAGE 2022

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Manufacturing Engage 2022

Tuesday, October 25 – Friday, October 28
Kansas City, MO

What's Your Story?

Send Us Your Story

Each issue of The Record will feature stories from members – and we want to hear from you. Send us stories of success, or those that fit the theme of the month's issue. The submission deadline is the first of the month prior to publication.

Contact Rena Montedoro at rmontedoro@ntma.org

Upcoming Themes for The Record

OCTOBER

Automation & Robotics...Where Are You on the Journey?

NOVEMBER

Workforce Development, Training, Grants...Attracting, Retaining and Developing Your Workforce



PRESIDENT'S UPDATE

As we approach the end of yet another challenging, but exciting, year in manufacturing, I want to remind our industry and each NTMA member that, in the midst of the year end run, we have the unique and very important opportunity to showcase our companies and our industry via **MFG Day 2022, October 7th**. This is a day when our industry, “**MANUFACTURING,**” gets recognized locally and nationally, encouraging companies to open their doors to their communities, schools, and city/state leaders. A day when we get to show our communities what actually happens inside a manufacturing shop. Even if they know someone who works in our facilities, they seldom know what happens on the “inside.”

If a friend, neighbor, or family member can't imagine manufacturing, it's hard for us manufacturers to talk to them about what we do. That's why manufacturers seem to stick together, but that also causes our industry—including its opportunities—to be the best kept secret. Those who can't imagine manufacturing (parents, teachers, counselors, media) are also those who don't recommend or guide kids towards manufacturing careers. What little they do understand about manufacturing has come from a book or an old story about Grandpa working in a dark, dirty, loud, and dingy environment. Why would anyone want to follow that career path? The point is, no one would. And the real point is their perceptions around manufacturing are not reality. Today's shops are bright and clean; many are cleaner than our homes.

Today's shops abound with computerized equipment, engineers, designers, planners, scheduling systems, and material handling equipment, coupled with

automation accessories such as robotics and multitasking machines. Our job is to help America re-imagine, understand, appreciate, and support the U.S. manufacturing community. MFG Day provides an incredible opportunity to open up our facilities and invite the community in and dispel misperceptions.

Seeing the innovation and the sophistication of equipment in our shops will open the eyes of young and old. For young people to see equipment with many of the automated features they spend hours playing with at home inside a shop will be surprising. Young people should be encouraged to see the link between innovation on the shop floor and making a living doing something they love. How cool is that? Couple that with the fact that they will produce parts that can change the world—parts potentially used on the surface of Mars, or the ocean's floor, or within a person's body, or in the airplanes we fly, or in our country's security, the list goes on and on as the opportunities are endless.

When guests enter our facilities, they will enter with caution, a little trepidation, and most likely a very distorted view of what they think manufacturing is all about. But as they move through the tour they will discover, and often with amazement, the miracle of modern manufacturing. They will see products they thought just appeared on store shelves actually being made. They can look around and see raw material being transformed into what some may say is a piece of art. That piece of art could be a critical component for an airplane, spaceship, industrial product, medical device, or so many other vital things that shape our everyday lives.

Our job on “**MFG DAY 2022**” is to open our doors and welcome our guests into our shops. An open door without an invitation is nothing more than an open door. The world outside of our facilities must know they are invited, welcomed, and encouraged to attend, to see what's inside the doors of the shops in their community. I encourage each of you to tell “your story,” and have your team members tell “their stories” of what manufacturing means to you as individuals and how it has influenced your lives. Finish by making sure they see the opportunities of manufacturing, explain to them the pathways to get into manufacturing, and the financial rewards of a manufacturing career. Remind them they too can imagine manufacturing and can be a transformer of material into product.

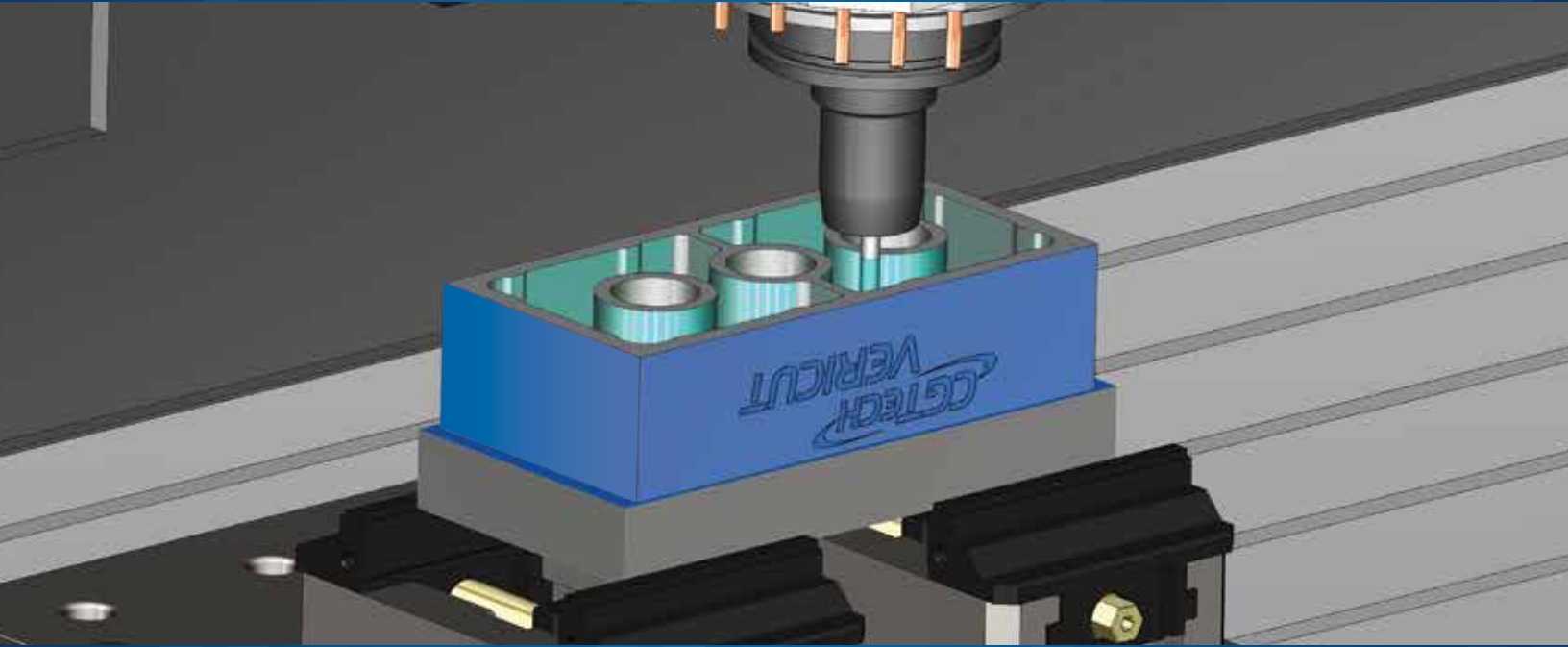
I do hope you will, once again, open your shop on this important day in your community. If you have never participated, this would be a great year to start. **Our industry is at a crossroad, competing for the next generation of manufacturers.** Let's do our part NOT to be the best kept secret and let the world know that manufacturing is the backbone of America.

As an association, together, let's continue to grow our membership. Ask other manufacturers in your area to join NTMA so that we can influence the future of U.S. Manufacturing.

There is Strength in Numbers.

Roger Atkins, President – NTMA

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NEW MEMBER HIGHLIGHTS

DYNAMIC MACHINE PA

Northwestern Pennsylvania Chapter Member



Dynamic Machine began doing business in PA in 2014. The Dynamic Machine PA Technical Center was opened in St. Marys in 2018. The option to purchase Dynamic Machine PA was presented to Joel Parana and Jude Viglione. After the purchase of Dynamic Machine PA, Joel and Jude invited Bob Bauer to join the team as a full partner. The three owners have close to 60 years of machine tool experience. Their focus continues to be on Western PA. Joel and Jude worked many years at Boldt Machinery and Bob Bauer came from Allegany Machine. Their mission as an employee-owned company is to provide only quality machine tools backed by the best service and support in the industry. Specializing in offering machines that are application specific, rigid, high-quality, and easy to maintain, they are committed to the success of their customer's businesses.

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TAKT delivers simple, efficient manufacturing solutions for custom part buyers and job shops. Optimize your workflow with TAKT's turnkey project support, including quoting, estimating, operations, and sales services designed to help you source premier parts fast.

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www.taktmanufacturingsolutions.com

GLOBE TECH

Central at Large Member



Globe Tech was founded in 2003 and, although its core business has evolved, its primary principle remains unchanged—Globe Tech serves those who serve. Globe Tech is a woman-owned small business (WOSB) honored to manufacture world-class systems and components to serve a broad array of customers, ranging from all branches of the military to tier one automotive suppliers for tooling and production to commercial markets. The company has invested in solutions and technologies to ensure the safety and security of this country and, ultimately, to save lives. From design to machining to welding, Globe Tech's extensive list of capabilities are all done in-house. The company also offers stamped and fabricated products, prototypes, tools, gages, and designs, as well as worldwide program management and procurement, all while maintaining the highest quality and safety standards that include: IATF 16949:2016, VDA 6.3, ISO 9001:2015, A2LA 17025, AS 9100 and CMMC compliant. Globe Tech has experience in effective project execution under tight timelines and inconsistent source availability.

40300 Plymouth Road, Plymouth, MI 48170

(734) 656-2203

www.globetech-us.com

NORTH EASTON MACHINE COMPANY, INC.

Boston Chapter Member



North Easton Machine Company, Inc. (NEM) was founded by Donald Holbrook in 1964. Mr. Holbrook purchased his first Brown & Sharp CAM screw machines from his former employer, Easton Machine Products, at auction.

He set up shop in one side of the two-car garage at his home in North Easton, Massachusetts. For the first few years, his wife, Marie, would order material, tools, and accept deliveries during the day to support his nightly production. He worked full-time during the day for Machine Craft in Whitman, Massachusetts. Mr. Holbrook eventually left this job and dedicated himself to his business full-time.

We utilize the latest CNC Swiss, CNC Lathe, and CNC Milling machines for superior speed, precision, and versatility. Our equipment has the capability to manufacture complex parts in a single operation, maximizing product quality and minimizing lead times for our customers.

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LOWER LEVEL MACHINE WORKS INC.
Eastern at Large Member



Lower Level Machine Works was founded by Gordon Alexander who learned the trade while serving as a Machinist Mate on submarines in the U.S. Navy. After leaving the service in 2018, he pursued his passion for manufacturing all manner of precision components for all levels of prototyping and industrial needs. This disabled veteran owned local shop is located in Rochester, NY.

Lower Level Machine Works serves the aerospace, defense, mold making, and tool and die industries. In addition to machining and heat treatment services, programmable logic controllers and automation services are offered.

231 Latona Rd. Rochester, NY 14626
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NEPIRC
Education Institution Member



NEPIRC is a not-for-profit technical assistance firm that provides world-class assessment, performance evaluation, training and consultative services to small and mid-sized manufacturers throughout northeastern, the northern tier and parts of central Pennsylvania.

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IN MEMORIAM - MERLIN HANSON

On behalf of the National Tooling and Machining Association, we express our condolences to the family and friends of Merlin Hanson, former NTMA Michiana Chapter President and NTMA National Chairman, who passed away June 21. His years of active membership in NTMA strengthened our industry, association, and Southwest Michigan community to what it is today.

A titan of Southwest Michigan industry, Hanson was previously the president and CEO of the Hanson Group, the corporation over Hanson Mold, Hanson Logistics, Eagle Technologies, and Hanson Beverage. As a community leader, he was instrumental in

founding Cornerstone Alliance and supporting Lake Michigan College, alongside several other causes. Numerous community leaders expressed their admiration for Hanson's life and service to Southwest Michigan.

We send our condolences to the entire NTMA Michiana Chapter as well as his family, friends, and colleagues. In lieu of flowers, memorial contributions may be made to Caring Circle of Spectrum Health Lakeland, Lake Michigan College, Training Center, or donor's choice.

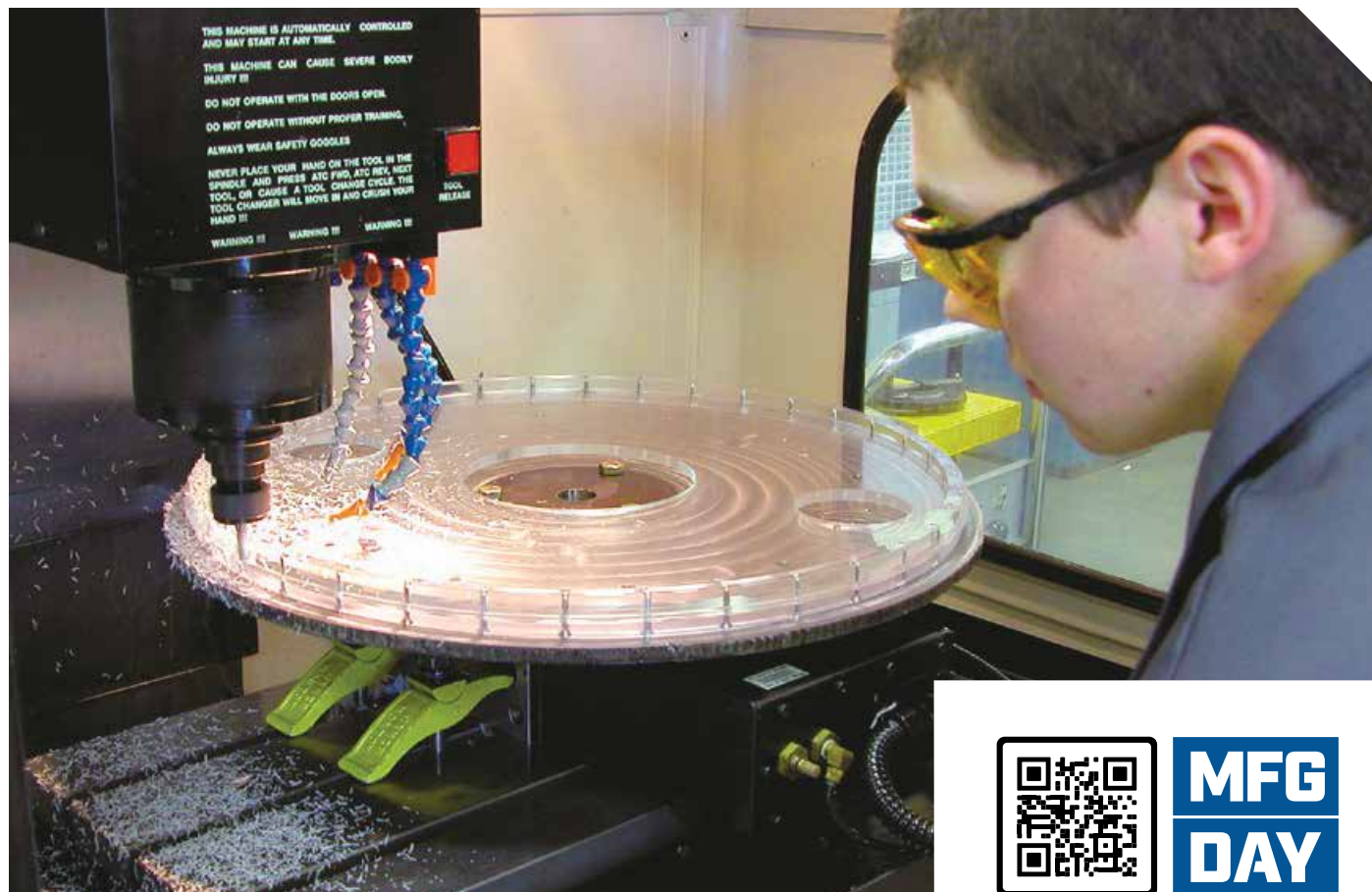


Merlin Hanson, former NTMA Michiana Chapter President and NTMA National Chairman



MANUFACTURING DAY'S IMPACT ON A TURBULENT ECONOMY

By: Felber PR & Marketing



Manufacturers have been, and continue to be, on a wild ride. While supply chain is grabbing the headlines, companies know that the heart of the problem is recruiting workers at all stages of production. Manufacturing Day, or MFG Day, is a long-standing initiative of The Manufacturing Institute, with the Fabricators & Manufacturers Association as a founding partner. Friday, October 7, 2022 is the date, however, events take place throughout the entire month of October.

What is MFG Day and why is it important?

MFG Day is manufacturing's biggest annual opportunity to inspire the next generation to start careers in modern manufacturing through a series of focused events to promote manufacturing to students, parents, and educators.

"Manufacturers in the United States need to fill 4 million jobs by 2030, according to a workforce study by The Manufacturing Institute and Deloitte. More than half of those jobs could be left unfilled because of two issues: a skills gap and misperceptions about modern manufacturing."

It is no secret that there is a labor shortage and skills gap in the United States. Manufacturers have felt this pain for years. What can you do this year to help? Start by looking for a MFG Day event in your area. Better yet, become a creator and host an event.

Need some inspiration? Check out our past articles on Manufacturing Day on our blog. We have articles and stories covering the past seven years. Participating and engaging your local market will impact your recruitment activities.

There are employees out there and, given a choice, they will want to work with a forward-thinking organization that cares about the community they call home. Partner with your schools and technical training organizations. Arrange a tour, create an internship program, and build tomorrow's workforce today. Yes, it takes effort and resources but to not only survive but thrive, your manufacturing company needs to embrace multiple tactics. Make the commitment and join MFG Day.



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NEW BLUETOOTH DROPWR BY ACU-RITE TO MAKE DEBUT ACU-RITE'S TABLET DIGITAL READOUT SYSTEM TO BE INTRODUCED AT IMTS 2022



Acu-Rite's Tablet Digital Readout System

Offering machinists a pioneering way to a new Bluetooth-enabled digital readout, HEIDENHAIN presents the highly anticipated ACU-RITE-brand droPWR. This new droPWR is a first-of-its-kind system to enable an iPad® tablet to become a digital readout (DRO), doing everything an ACU-RITE DRO can except without cables between tablet and machine tool! The droPWR will first be shown at IMTS 2022 in Chicago on September 12-17.

Bluetooth technology along with an IBT interface box in the droPWR system allows connection to multiple machine configurations in one tablet including for milling, turning, and grinding machines with up to six axes. Designed to be simple and functional, this tablet DRO can be moved and used with various machines, making it perfect for many production environments such as small shops and for students in shop class.

The new droPWR takes manual machining to the next level by combining the familiar intuitive user experience from the traditional ACU-RITE DROs with modern touch screen conventions. The new droPWR system includes the new software, an IBT interface box suitable for the machine tool and relevant encoders/brackets if needed. A tablet with iOS 15 or greater is required. And with its simple on-boarding configuration set up, a user can quickly establish connection to its intended machine(s).

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About HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH, headquartered in Traunreut, Germany, develops and produces linear encoders, angle encoders, rotary encoders, and CNC controls as well as software solutions for the Digital Shop Floor. More than 8,600 employees worldwide are working on products that often lay the groundwork for technological advances in the most innovative global

industries, including semiconductors, electronics, machine tools, and production equipment automation. The North American subsidiary is HEIDENHAIN CORPORATION, headquartered in Schaumburg, IL, and San Jose, CA.

www.heidenhain.us/about-us

ACU-RITE is a brand of HEIDENHAIN consisting of digital readouts, linear scales and controls. ACU-RITE DROs and controls are manufactured in the U.S.

www.acu-rite.com

Media contact:

Kathleen Herrmann, K-Pro PR, Inc.
kherrmann@kpropr.com or 224-520-0665

Product contact:

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DATANOMIX AND FLEXXBOTICS PARTNER TO AUTOMATE PRODUCTION MONITORING FOR UNIVERSAL ROBOTS

Precision manufacturers can now monitor Universal Robots workspaces in real time and over time to maximize ROI and realize continuous improvement

Datanomix, maker of the industry's only Automated Production Intelligence™ software platform, announced support for monitoring Universal Robots for real-time visibility into robot performance. By partnering with Flexxbotics, a leader in robotics process improvement technology, Datanomix extends its automated production intelligence coverage to Universal Robot cells, helping power lights-out and automated operations at precision manufacturers.

“Datanomix customers are investing heavily in automation, and robotics are a key success factor in the automation movement,”

As part of the technology partnership with Flexxbotics, Datanomix gains access to real-time operational data for Universal Robots from Flexxbotics via their FlexxConnect™ platform. Advanced utilization and performance data for Universal Robots is collected and displayed in the Datanomix platform, offering insights into both cobot and CNC machine cycle time, part counts, run time, and machine/robot status to allow precision manufacturers to make better-informed decisions around automating their factory. In addition, FlexxConnect™ provides truly centralized and revision controlled cobot and CNC program management capabilities, and guided workflows for both cobot operators and CNC operators.

“Datanomix customers are investing heavily in automation, and robotics are a key success factor in the automation movement,” said Greg McHale, co-founder and CTO of Datanomix. “Our job is to provide manufacturers with the data and insights they need

to help optimize their factory operations. Partnering with Flexxbotics delivers a turnkey integration with Universal Robots that offers deep insights into robot performance, cycle time, utilization, and capacity, satisfying pent-up demand from our customers. And this is just the start of our collaboration to help automate more of our combined customers' operations.”

With this initial integration, existing Flexxbotics customers can add Datanomix to their deployments, and similarly, Datanomix customers can add the Flexxbotics management platform to Universal Robot installations. Using Flexxbotics' underlying technology, the Datanomix platform receives performance information directly from Universal Robots, and visualizes it alongside the performance data from the CNC machines the robots empower.

“The partnership between Datanomix and Flexxbotics was a natural fit,” remarked Tyler Bouchard, CEO of Flexxbotics. “In addition to sharing several customers, more importantly, we share a common philosophy of delivering advanced functionality through a simple, intuitive user experience that complements manufacturing workflows instead of working against them. Customers who love Flexxbotics love Datanomix and vice versa, and the enthusiasm for the partnership has been overwhelming.”

The Datanomix Platform automates the collection and analysis of manufacturing data and delivers deep insights into production performance, both in real-time and over-time. Designed for growth-oriented precision manufacturers, the Datanomix platform delivers industry-leading innovation of manufacturing productivity with no operator input required, and without burdening the end user with cumbersome analysis or data crunching.

The Flexxbotics platform significantly increases Cobot tended CNC utilization and productivity through a

suite of robot redeployment, robot monitoring, robot to CNC connectivity, guided workflow and robot/CNC program management solutions.

Learn more about Datanomix by visiting their online resources center to explore blog posts, customer stories, news, videos, and more.

To see Datanomix in action, please visit www.datanomix.io/schedule-a-demo/.



About Datanomix

Datanomix delivers Automated Production Intelligence for discrete manufacturers with no operator input required. Its core product set includes its flagship Production Monitoring system, along with Digital GEMBA Boards, and Condition Monitoring systems. Based in New Hampshire, Datanomix exists to provide manufacturers with out-of-the-box reports and workflows that align with the way manufacturing people already work, without the need for manual data crunching or workflow disruption.

Learn more at www.datanomix.io.

Flexxbotics

About Flexxbotics

Flexxbotics is a robotic process improvement company focused on breaking down the technical barriers to making automation equipment as active as machine operators. Flexxbotics' mission is to free robots from the complexities surrounding a dynamic robotic work cell so manufacturers can easily and flexibly deploy Universal Robots in a way that makes sense for their factory.

To learn more, please visit www.flexxbotics.com.

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SANDVIK MATERIALS TECHNOLOGY (SMT) TO BE LISTED ON NASDAQ STOCKHOLM, AUGUST 31, 2022



The Annual General Meeting of Sandvik resolved, in accordance with the Board of Directors' proposal, to distribute and list SMT on Nasdaq Stockholm August 31, 2022. SMT will be renamed Alleima at the day of listing.

"We are pleased to take the next step in the process to establish Alleima as a standalone listed company. Alleima will continue to develop its position as a market leader for advanced materials for the future," says Andreas Nordbrandt, Chairman of the Board of Directors of future Alleima.

"Sandvik's shareholders have today taken a historic and important decision. We have been looking forward to this and it gives us the strength to fully execute our strategy. Going forward we aim to drive profitable growth by capitalizing on global megatrends playing in our favor, such as the transition towards more

sustainable energy sources, energy efficiency, electrification, and medical growth to name a few," says Göran Björkman, Business Area Manager of SMT and future President and CEO of Alleima. The aim now is to grow Alleima in several high-growth segments, such as industrial heating, medical, hydrogen and renewable energy, and the chemical and petrochemical segment.

"Already today, we have a leading position in most of the segments in which we operate and sales in about 90 countries. We are a financial high performer as well as a technical leader. As Alleima and a standalone company, we will be compared to peers in our industry," says Göran Björkman.

Based on close and long-term customer partnerships, and a 160-year history as SMT, moving forward as Alleima advances processes and applications in the most demanding industries and enables our

customers to become more efficient, profitable, safe, and sustainable.

"We set out to lead the way in sustainability – both in product offering and our operations," ends Göran Björkman.

Alleima will host its first Capital Markets Day on August 23, 2022. The Capital Markets Day will provide an in-depth overview of Alleima's product offering, key customer segments, strategic direction, and financial targets as a standalone listed entity.



More information on the listing and distribution of Alleima, including an information brochure, key dates and events, and frequently asked questions can be found at www.home.sandvik/en/investors/alleima-listing.

STUDENT PASSPORT TO MANUFACTURING

By: Tami Adams, NWPA Chapter, NTMA

The NWPA Chapter NTMA Academic Outreach Team held a pilot event, Student Passport to Manufacturing, in partnership with PENNCREST School District in March 2022. The concept of the event was to invite elementary and middle school students to tour NTMA member companies on a Saturday when a parent needed to transport the student. The expected outcome was not only to show students how cool tooling and machining is, but also to get parents exposed to the career opportunities available in the industry.

The team coordinated three NTMA Member sites to host the tours and the school district, thanks to the active participation of the superintendent on our team. Members promoted the event and took registrations. The sites selected were various sized businesses serving different market segments

and within close driving distance of one another. Participating companies included Acutec Precision Aerospace; Pinnacle Molds, an Adler Co.; and Highpoint Tool and Machine; with a bonus tour of the Sippy Historic Machine Shop.

The event was from 9 am to 1 pm on Saturday, March 26, 2022. Each company offered tours on a rolling start time so participants could move from site to site at their own pace. Students received a Passport at their first stop and collected stamps as they visited each company. Once all stamps were collected, families gathered at a nearby elementary school where students entered their name in the prize drawing and were offered lunch provided by the school district. Prizes provided by the NWPA Chapter NTMA included a hoverboard, a drone, an Xbox, and three 3D pens.



There were 73 students ranging from 3rd to 8th grade who completed the tours and more than 170 total participants including parents, siblings, and interested grandparents. Students were extremely excited and engaged during the tours, and many adults commented that they had no idea the extent of what was being created within the businesses. The team truly believes the event was eye opening for both students and their families and is looking to expand to additional regions around MFG Day this fall.

A huge thank you to team members who actively participated in the preparation and execution of the event: Clay Dawson (Chair), Starn Tool & Manufacturing Co.; Tim Glasspool, PENNCREST School District; Kyle Astor, Acutec Precision Aerospace; Eileen Mullen, Crawford County K-12 Career Education Alliance; Sean Kineston, Highpoint Tool and Machine; Sabrina Seeley; and Tami Adams, NWPA Chapter NTMA.



The New American Manufacturing Renaissance

By: Andrew "The MFG" Crowe

I grew up in a tough environment and wasn't exposed to many things. I thought my options were limited, that a good life and the American Dream were unattainable for people like me. I made some poor decisions, not to be a villain but to merely survive. Then, manufacturing found me and gave me a second life. It looked past who I was and gave me options and avenues to become who I wanted to be. If it wasn't for manufacturing, I would have been back on the streets, doing the things that I promised myself I wouldn't do.

Because I owe so much to the industry that saved my life, I made it my life's mission to make sure everyone has access to this industry, and that even more people can find it before they are on their second chance. I want to give back to the industry that saved me.

I couldn't sit back and watch as the work comes back and the machines go unattended. As jobs continued to be unfilled, I got out from behind my desk and decided to do something about it. The birth of the New American Manufacturing Renaissance was among us. I went out into American cities to reinvigorate American Manufacturing by connecting jobs to the jobless. Introducing hope to the hopeless and inspiration to the once overlooked and underserved. In each city, I spend two days building excitement for a strong manufacturing presence. On the first day, I am out in the community, at schools with students, parents, and job seekers, showing them how a career in manufacturing could change their life, and potentially be the vehicle to break generational curses like it did for me. On the second day, I work with (subject matter experts) SME's and manufacturers to give them the tools and skills needed to recruit and retain the new generation of workers. I help them utilize local organizations to help with recruiting, vetting, soft skill development, etc. I give them tips and tools to expose students and parents to manufacturing careers early, through things like a strong MFG Day and community tours, which will ignite early interest in youth.

I tell a story that's not only immersive and informative, but also educational and inspirational,



hoping that one of the young men and women, the decision makers, the job seekers, or even some of our blue collar boys and girls in the audience might hear my story and get the push they so desperately need to find not just a good job, but a great career in the ever-growing field of manufacturing. My main objective is to open their eyes the idea that a better life is within their reach and not just a dream. Regardless of who you are or where you came from, **YOU HAVE OPTIONS.**

This is how you connect the job seekers to those jobs we desperately need filled.

Educators, students, parents, and even leaders in the manufacturing industry will get the tools they need to connect and collaborate with some of the greatest

minds in the field while also being able to chime in with any questions they might have during our live and interactive Q&A sessions.

Our goal is for kids and job seekers around the world to discover what manufacturing can do for them—give them a career they can enjoy that not only supports themselves and their families, while also providing tremendous opportunity for growth.

I started with a mission to do whatever I could to give back to my community and the industry that saved my life. I didn't know what it would look like or how it would happen—but the more I keep moving forward, the more the vision becomes reality.

HELPING FILL THE SKILLS GAP

Attract, Retain & Develop a Skilled Workforce

Attracting, retaining and developing your precision machining workforce is among the most critical challenges manufacturers are currently facing. In partnership with industry experts, NTMA developed NTMA-U, a fully online educational program that can help deliver an empowered workforce, providing you benefits that will positively impact your bottom line. NTMA-U provides both the related instruction for a machinist apprenticeship and specific incumbent worker training.

NTMA-U key features include:

- Available anytime, anywhere with Internet access
- Narrated courses with practice problems and assessments
- Content covers NIMS competencies, paired with resources
- College credit-earning potential with articulation agreements
- Federal Bureau of Apprenticeship Training approved

Visit www.ntma.org/programs/education for more information. For questions or to get started, contact Bill Padnos at bpadnos@ntma.org.

Employees are the fuel that powers the engine that is your manufacturing business. Let's make sure that your tank is full.

All Great Leaders Leave a Legacy

By: Nate Ragolia, Strategist at Beanstalk Collaborative

All great leaders leave a legacy. For some, like the pharaohs of Egypt, that legacy took the form of the Great Pyramids, and other massive monuments. For others, the legacy is quieter, less ostentatious, no less meaningful: a family name on a business that lasts for generations, or just the word-of-mouth reputation for excellent work and service.

As we look forward to a new generation in American manufacturing, one that will include a changing workforce, more automation, and new solutions to new problems, many business leaders are looking forward to their retirements. And with retirement comes the question: What legacy do I, and my company, leave?

Our businesses are, for lack of a better term, our babies. They are unique in that they grow and change over time, but they never leave home to start their own lives. They are ours for as long as we'll have them, and we want to be sure that they'll be taken care of when we're gone.

When you're thinking about retirement, or maybe just selling, what are you thinking about most? The free time? The money? The team of workers you used to lead? The community that benefited from having you and your business in it? There are no correct answers to these questions, only honest ones. And it's never too early to think about it.

No matter what, when you leave your business, through sale, family succession, employee ownership, or a myriad of options, you'll leave a legacy. Will you be remembered fondly on the shop floor? Will your company name still beam at you from the signage on your former warehouse? Will your former employees smile and raise a glass to you at your favorite local restaurant? These might be important things

to consider when it's time to take a hard-earned breather.

Manufacturing in the U.S. has a legacy too. It provides 12.8 million jobs—the vast majority with livable wages and benefits—while accounting for only 8.4% of total U.S. workforce. The industry contributes \$2.4 trillion to the economy, too, making U.S. manufacturing the 8th largest economy in the world. And in the local community, every dollar spent in manufacturing adds another \$2.79 into the local economy (via wages, vendors, transportation, and more). That impact is meaningful, not just for business leaders, or consumers, but for workers, and towns and cities, too.

Those of us driving U.S. manufacturing—as owners, managers, employees—can act as stewards to the legacy of the industry. We can ask those same questions about legacy in the context of an individual, a business, a community or network, and the manufacturing economy as a whole.

At Beanstalk Collaborative Community Wealth, our mission is to preserve manufacturing businesses, their jobs, economics, and community benefits, forever. We partner with manufacturing owners who are ready to exit, and who want to preserve their legacies and their businesses, for years and generations to come by purchasing the business, and then building it and holding it—with no intention to sell, ever. We call it the “buy, build, and hold” model, and it's central to our focus on maintaining community wealth and preserving U.S. manufacturing.

You could say that legacies are our business. We want to protect yours. We want to keep yours shining bright. We want to ensure that your former coworkers

are happy to see you at church on Sunday, and that the only strife in your retirement life comes from a shanked drive into the rough, or a snagged fishing line. We've got the experience to do it, too. CEO Troy Roberts and Co-Founder Bill Smith have more than 65 combined years managing large (\$200 million revenue) and mid-size precision manufacturing companies (\$10 million revenue), while driving their growth and success. Bill even knows the succession process from personal experience, having just sold his own business two years ago.

We've already put our model into action, having acquired a Midwest-based precision mold manufacturer via collaboration with their retiring owner, and we're seeing the positive impact of the “buy, build, and hold” model in action. We'll share more about those successes in a future article.

Whatever legacy you leave has to be the right one for you. If you're not quite there yet, we're available to advise you on options and ways you can improve your company for succession and sale. Our goal is to help you find the exit that fits you and your company, and one that, ideally, leaves a lasting, beloved legacy.



Beanstalk Collaborative Community Wealth, LLC (BCCW) is a holding company dedicated to providing attractive financial and legacy-protecting opportunities to transitioning owners in the manufacturing industry, while preserving and growing businesses and jobs. Learn more at beanstalkccw.com.

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ONE VOICE: FEDERAL GOVERNMENT ADVOCACY PROGRAM

As US manufacturing continues to navigate the unique challenges and changes brought on by the last year – and a change in administrations – it remains important to have a partner in advocacy. NTMA helps provide this support by working closely with the team at One Voice: the combined federal government advocacy program representing small-and medium-sized business manufacturing in the US.

With regulations, policy, and shop safety all constantly evolving, One Voice has a wealth of fantastic resources, developed to help keep your shop informed and prepared for whatever comes next. In addition to ongoing COVID-19 response information – in line with any and all changes that our industry may need to know – the team at One Voice also provides informative policy webinars, news releases, educational materials, video recaps, and much more.

Don't forget about the Talking With One Voice podcast – every episode, the One Voice advocacy team breaks down how the latest news from Washington impacts manufacturing businesses across the country.

It's yet another way your shop can get quick, concise information on everything from tax development to loans and even workforce development issues. You can send in your key questions to be answered by emailing onevoice@policyres.com.

We hope you continue to utilize this key partner in One Voice – one that ensures that millions of manufacturers across the country have their voices heard.

Please visit www.metalworkingadvocate.org for more information.

www.OneVoiceInfo.org
ONE VOICE COVID-19 (CORONAVIRUS) RAPID RESPONSE WEBSITE

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A JOINT EFFORT BY NTMA AND PMA

Let's Get Back To the Basics

By: Michael Watkins, MBA/JD, EBITDA Growth Systems

These are interesting times that we find ourselves in. There is the perfect storm of a possible recession, the war in Ukraine and the challenges associated with a malfunctioning global supply chain.

“While economic output contracted for two consecutive quarters in the first half of 2022 (the definition of a recession), a strong labor market means that currently we are likely not in recession,” said Frank Steemers, senior economist at The Conference Board. “However, economic activity is expected to further cool towards the end of the year and it is increasingly likely that the U.S. economy will fall into recession before year end or in early 2023.”

The war in Ukraine which has now reshaped international energy costs on a global basis, helped create massive global food shortages, seriously damaged the entire Russian economy, and helped trigger a massive increase in the rate of inflation on a global level. The full military impact remains unclear. The short-term economic impacts of the war are likely limited for the U.S. since its trade ties with Ukraine and Russia are modest, although the commodity prices surge is pressuring inflation higher.

Global supply chains have been buckling under the strain of unprecedented demand and constricted effective logistics capacity. On average, global container shipping rates have more than quadrupled since 2019, and schedule delays have risen. In some key trading routes, such as Asia–Europe and Asia–North America, the rate spikes are even higher and the delays more frequent.

This is the worst that it's been in 50 years—and it's probably getting worse, considering that China has been shutting down cities and production facilities. The massive lockdowns in Shanghai and Beijing will eventually ripple through the system again.

Despite all that is going on economically on the national and world stage, it is important to remember that you shop owners are entrepreneurs. My definition of an entrepreneur is one who relentlessly pursues opportunity without regard for resources not currently under their control. In other words, as entrepreneurs you all have always operated in an atmosphere of

uncertainty. If you think about it that way, the current uncertain business environment is business as usual...sort of.

In the midst of all of this uncertainty and confusion, my quiet recommendation to shop owners is to get back to the basics. Concentrate on what we at EGS refer to as the five core functions:

1. Finance – know your numbers.

Understand your gross margin and the things that impact it. Then, and only then, will you have a chance of pricing your product/service correctly.

2. Marketing

Determine your company's unique value proposition and tirelessly communicate it to your target market.

3. Sales

Respond in a timely fashion with competitive, but profitable (see Finance) quotes.

4. Operations

Work every day to achieve industry leading metrics in quality; on-time delivery; efficiency and productivity (earned hours.)

5. Management

When you take a look at your income statement you will notice that labor is your single largest expense. Make certain that your leads, supervisors, and managers have the ability to tend to the “care and feeding” of your largest expense.

Uncertainty and confusion is “the game that is on the calendar, so you may as well play it.” If you need help, get it. Dig your well before you are thirsty and don't wait until calamity hits before you seek support. In today's environment, the industry needs as many entrepreneurs as it can get.



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Inspire and Engage the Future Workforce With MFG Day Events

By: Jeremy Bout, Founder, EdgeFactor

Over a decade ago, before founding Edge Factor, I worked as a 5-axis machinist, making cutting tools for a company in Buffalo. Our clients used our tools on parts going to space, medical implants, race cars, and motorbikes. Every morning I got up, pulled into work, and used my head, my hands as well as the latest advanced manufacturing technology to work on products that were being used by people across the country.

I'd go home to my wife and five kids with a nice paycheck in hand and a feeling of accomplishment. But when I would tell my friends and family about how proud I was of the team of manufacturers I was working with, how we problem solved and innovated or how hard I pushed my 5-axis that day, I was met with blank stares. They didn't get it! They didn't know what a 5-axis was. Heck, they didn't even know what a CNC machine was! "Manufacturing? Isn't that all overseas?" Facepalm.

Manufacturer Turned Filmmaker

This experience in the manufacturing industry was the catalyst for starting Edge Factor. There were inspiring stories being shared on the shop floor and I knew these stories needed to be shared. So, I took my love for manufacturing and the transferable skills I had learned, leveraged the power of storytelling, and launched a new company.

At Edge Factor, we use the power of cinematic stories to take learners of all ages on a journey from "I have no idea what I want to do with my life" to discovering industries, careers, postsecondary programs, soft skills, STEAM, and local opportunities. Since our first film, we have produced thousands of films, videos, and interactive activities that highlight every industry and deliver these tools through our platform.

Edge Factor equips educators, workforce leaders, and families with age-appropriate e-learning multimedia experiences. We have created thousands of learning objects with accompanying lesson plans and interactive activities—and we are adding new content daily!



We all Have a Role to Play in Workforce Development

In communities, I have heard stories like Connor's—a high school student looking to the future with little knowledge of the career opportunities that are available to him. His parents would like him to study and work close to home but aren't aware of opportunities in their own community. Meanwhile, local business owners are looking to hire skilled workers. They want the future workforce to know they offer on-the-job training, good pay, opportunities for growth, and more.

The business owners work with their local workforce development team, who liaises with local high schools and colleges, but they need a tool to connect students, parents, and educators with local businesses. That's where Edge Factor provides the solution. When it comes to workforce development, everyone has a role to play.

5 Ways to Inspire the Next Generation

It's hard for students to imagine what a "day in the life" looks like in careers, without being able to see the work environment. Edge Factor provides students an authentic look at what it's like to work in a wide variety of roles—from the apprentice role to the President, and everything in between. This helps students understand where they can begin, and where their career can take them.

When companies open their doors to students and job seekers, they become engaged in their career exploration journey.

Here are five ways manufacturers can inspire the future workforce:

- *Connect with your local schools to build relationships with tech educators, understand their programs, needs, and look for ways you can get involved.*
- *Offer to host a virtual or live session for students to learn about your company, careers, the soft skills that you value in your team members, and how you use Science, Technology, Engineering, Art, and/or Math (STEAM).*
- *Host a tour of your company or Manufacturing Day event.*
- *Connect with your local Chamber of Commerce and/or Economic Development team. Often they host career fair day events, student awareness days, etc. and you can participate.*
- *Share stories of your team members. What inspired them to get involved at your company? How does your team build products that impact the world? What types of technology do you use? Look for ways online and in-person to showcase what you do and the team members that make it all possible.*

Edge Factor can help you bridge the Skills Gap

One of our favorite times of the year is just around the corner: the official Manufacturing Day (MFG) is booked for Friday, October 7, 2022! It's a day when schools, companies, workforce development leaders, and families across North America come together to celebrate the incredible careers and technology in the world of advanced manufacturing. The goal is to inspire the next generation of manufacturers by providing live and virtual tours of manufacturing companies and showcasing the career opportunities in this fast-paced industry.

Since 2015, Edge Factor has empowered more than 5700 Rock MFG Day event hosts with turnkey tools to engage live and virtual audiences. This year is no different! The team at Edge Factor is launching the 2022 Rock MFG Day toolkit to equip companies, associations, workforce development leaders, manufacturing training programs, and schools with multimedia tools to complement and enhance their MFG DAY events!

Edge Factor and our partners, which include NTMA, have created a ROCK MFG Day toolkit that includes high-impact media, featuring inspirational stories of those in the manufacturing industry. The toolkit also includes a keynote presentation and "how-to guides" to help you host engaging events.

The 2022 Rock MFG Day toolkit will be available, for free, for everyone to watch, enjoy, and share with the media from September 1, 2022, to November 30, 2022.



Learn More About Edge Factor

To learn more about Edge Factor and how to get your company involved contact us at info@edgefactor.com. We'd love to hear from you.

Dominating Difficult to Machine Materials in Swiss-style Machining

Swiss-style machining is a modern manufacturing technique designed to produce small parts accurately, efficiently, and in high volumes. It often involves manufacturing parts from difficult to machine materials.

Various types of stainless steels and high temperature alloys are commonly found in shops that perform Swiss-style machining (Swiss shops) and are used to produce millions of parts annually across a variety of industries like aerospace, automotive, medical, electronics, firearms, and energy. Within these material classes, it is typical to find alloying elements such as nickel (Ni), chromium (Cr), molybdenum (Mo), and niobium (Nb), all of which can significantly reduce machinability. As a result, both stainless steels and high temperature alloys are prone to produce long, continuous chips, which can create issues with consistent chip management.

This inconsistency is problematic when operating unattended machines during large volume orders. Furthermore, these materials are notorious for causing shorter tool life and can lead to frequent tool changes, numerous offset updates, and increased quality checks. Luckily, today's Swiss shops have several techniques they can employ to tackle these challenges and achieve consistent and predictable results.

Carbide inserts used to machine stainless steels and high temperature alloys are prone to chip, notch, and wear out much faster than those used to machine other materials. To combat this, machinists can adopt the latest in high-performance coating technologies such as Kennametal's grade KCS10BTM,

which is specially designed for difficult to machine materials. An ultrafine grain substrate, matched with an extremely smooth coating surface, helps KCS10B resist depth of cut notching, crater wear, and built-up edge—the primary failure modes for these material classes. KCS10B is available in both negative and positive style inserts, as well as geometries for finishing, medium machining, and roughing applications. Kennametal has seen a marked increase not only in metal removal rates, but in consistency as well, leading to 20% higher productivity on average.

Chip management issues can also be alleviated through oscillation cutting. With this technique, cutting is performed by synchronizing the oscillation of a specified axis (X or Z) with the rotation of the main spindle. A momentary interruption in the cut breaks material into small chips. This function is entirely software driven, so no extra equipment is needed on machines designed to support this feature. Early reports indicate no deviation or decrease in surface finish while executing an oscillation cutting cycle. The data required to perform this cycle is automatically calculated based on the main spindle speed and the feed rate of the specified axis. Not only is this new technique helpful in breaking and managing chips, but the momentary interruptions can reduce heat in the cut, providing increases in tool life as well.

Regarding heat, difficult to machine materials carry high hardness ratings which generate increased friction and cutting forces. This leads to elevated cutting temperatures and high demands on tooling. Fortunately, many Swiss machine tools offered today

include options to utilize through coolant tooling, and with the cooling system itself designed to be compact enough to fit under a bar feeder, shops do not have to choose between premium floor space and adopting this technology. When directed properly, high-pressure coolant (300 to 1,000 PSI) will improve many aspects of the machining process like surface finishes, chip management, tool performance, and tool life. If chips are manageable and tooling is cooled and allowed to wear naturally and predictably, then cycle times and throughput can see increases anywhere from 40% to 140%.

Coolant, however, will not save you from wearing out tools. Changing tooling or simply indexing inserts can be a tedious process that stalls cycle times, slows changeover times, and frustrates production planners. Tooling for easier to machine materials can last for days or even weeks, but not when machining stainless steels and high temperature alloys. Luckily, advancements in quick-change tooling have significantly reduced both the initial setup times and the in-process tooling or insert change times that lead to frustration.

These quick-change units, like the Kennametal KM Micro™ quick change tooling, allow for fast and easy tooling changeover times and insert changes by installing shanks (clamping units) in the machine turret or gang plate that accept individual and easily replaceable cutting heads. Kennametal offers KM Micro heads designed for turning, boring, grooving, threading, cut-off, and more. By leaving the shank installed on the machine and only removing the cutting head, insert changes become quick and easy

for operators. Additionally, various cutting head styles provide the opportunity to have any tool at any location within the machine, allowing programmers and operators increased flexibility to speed up and simplify their setup times. Small and compact, Kennametal KM Micro quick-change units can significantly reduce downtime during both part cycles, as well as between setups.

Reduced setup times and improved throughput can also be achieved via tool probing, an automated method for measuring tooling and setting tool offsets as opposed to operators manually setting tools. New machines, like Mazak's Syncrex series, are offering automated tool measuring that can reduce setup times by not only automating the process for operators, but also by bringing consistency to the overall tool setup process. Manual setup times can

take several minutes, but tool probing routines can reduce that to just 30 seconds. With significantly improved setup times, Swiss shops can produce 10,000 parts or just 10 parts without suffering any serious production loss during changeover.

As Swiss-style machines gain popularity with industries and customers across the board, new developments in machining stainless steels and high temperature alloys will continue to present opportunities. Fortunately, there are several innovations already available to mitigate challenges and create efficiencies when working with these materials, like Kennametal's KM Micro quick-change units or Mazak's automated tool measuring routines. In the future, you can expect additional advancements in carbide substrates and coatings, such as KCS10B from Kennametal, to yield even further improvements

to machining times. Swiss-style machining can offer many advantages over conventional lathes, and when used in conjunction with the latest technologies on the market, you can dominate difficult to machine materials like never before.



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MFG

DAY

OCTOBER 7, 2022

**AN OPPORTUNITY
TO RECRUIT AND
RETAIN YOUR
WORKFORCE**

By: Bill Padnos, Executive Director, AMPED

When I was first hired by NTMA to serve as the Director of Youth Engagement, I knew I had to meet Roger Sustar of Fredon Corporation. Roger is a dynamic, innovative leader and I wanted to learn how he is engaging manufacturing's next generation through the AWT Foundation and its flagship program—AWT Robots. I knew Roger understood the value of youth engagement and is a true champion in his community when it comes to closing the skills gap.

What I really learned from Roger that day is caring for your employees, truly caring, translates to employee productivity, loyalty, and a culture where people love to work. During the tour, I was very impressed with the equipment on the floor and the parts being machined, but what really inspired me was how Roger interacted with his employees. He did not just show me what they were working on, he took the time to ask how they were doing personally and professionally. I noticed the smiles on their faces as they interacted with Roger and how much pride they took in their work.

If I actually had the skills to be a machinist and lived in Mentor, OH, I would have been inclined to ask Roger for a job after that tour. Who wouldn't want to work in a positive environment where you are valued and the boss takes personal interest in you? That type of leadership creates a happy, successful workplace that improves the bottom line. Roger's approach improves output and quality, and raises retention rates.

While MFG Day is about changing the perception of manufacturing careers in the eyes of students, educators and parents, in reality it is also about employee retention. The willingness of leadership to recognize the importance of investing the time to open their doors to the next generation is actually a smart strategic business decision. During a tour, you have the opportunity to turn all of your employees into recruiters as they engage with your guests and talk

about why they love their job. While productivity could decrease during this time, the long-term benefits to your operations will definitely outweigh any temporary hit.

Here are the facts and figures to back up the value that MFG Day brings to your shop.

- *A report from TINYpulse states that employees who believe their company has a higher purpose than just profits are 27% more likely to stay at their companies.*
- *Gallup research found employees who are "engaged and thriving" are 59% less likely to look for a job with a different organization in the next 12 months.*
- *Studies show that 79% of people who quit their jobs cite "lack of appreciation" as their reason for leaving.*
- *According to the Corporate Leadership Council, employees who are committed and engaged at work perform 20% better and are 87% less likely to leave their current company.*

Over the next decade, 4 million manufacturing jobs will need to be filled in the U.S. MFG Day is a time when our country recognizes and celebrates how important industry is to our economy by working together to inspire the next generation of creators. There are millions of jobs that will go unfilled unless we close the skills and awareness gap. What's not to like?

Visit <https://gonrl.org/mfg-day/> to learn more about MFG Day and the resources available to help you host an event.

79%

Of people quit their job over a lack of appreciation

59%

Of people engaged and thriving are less likely to look for a new job

27%


Of people more likely to stay if the company has a higher purpose

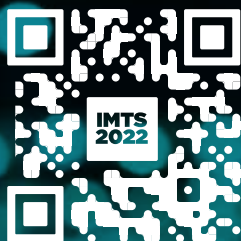




IMTS 2022

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IMTS 2022: History in the Making

An expo experience with transformative potential for manufacturing

Chicago has long been known for big things and broad shoulders. It has been the place of incredible events, such as the World's Columbian Exposition of 1893. While you might wonder what relevance that it could have besides a fun fact (it was meant to mark the 400th anniversary of Columbus' voyage—a year late), realize that the expo was largely responsible for the proliferation of electricity, as it was wired to deliver AC, not thanks to Thomas Edison, but George Westinghouse.

What does that have to do with IMTS 2022?

Arguably, this event, spread throughout the entire McCormick Place complex from September 12-17, will have demonstrations of an array of technologies that may not be on the level of electricity, but will have profound effects on the way products are manufactured.

DIGITAL DEVELOPMENTS

Consider digital technologies. While manufacturing has included digital control of machine tools since the development of numerical control in the early 1950s, today's digital networks span from the sensor level to the machine level to the cell level to the system level to the facility level to the cloud. Notably, this drives efficiency in a way that is consistent and reliable, which helps optimize entire operations. This level of information isn't simply useful but is transformative for those who take advantage of the capabilities. IMTS 2022 is a place where those technologies are on display and in actual use, so visitors have the opportunity not only to see the what but learn about the how.

AUTOMATION EQUIPMENT

Then there is automation, which is also not a new development—the electric motor was invented in 1820 and the first home had electric lamps in 1882—but one that is coming to greater applicability in shops of all sizes. Like digital technology, automation is providing the means to improve productivity of equipment on the factory floor, something that is being made all the more challenging due to the employment picture.

OTHER ADVANCES

Hybrid additive manufacturing that combines machining with building, advances in tools and tooling, quality equipment that helps minimize production waste, and an array of other types of machine tools, systems, and accessories are part and parcel of IMTS 2022, collected in nine pavilions throughout McCormick Place.

In addition, there is an extensive offering of conferences and sessions to provide additional insights into new technologies and the ways that shops are putting them to work.

In 1893, in Chicago, Grover Cleveland pushed a button and thousands of lightbulbs were illuminated. In 2022, thousands of lightbulbs will be lit in the heads of IMTS visitors.

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**JIM CARR &
JOHN BILEK**

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CARR Machine & Tool once served a dying print industry. Now its purchase orders have “An astronaut’s life depends on the quality of your work” marked in the flow down requirements. Digital technology transformed this 50-year-old company, and they’re looking for more innovation. Find the CARR team at IMTS 2022.

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“

We have found that there is an opportunity for us to help a lot of members, and plan to engage further.

– Bobby Mercurio, Global Shop Solutions

“

The networking opportunities are great, at each Engage Conference. I've given my business card to at least one person that reaches out in the weeks following for an RFQ.

– NJ Goulet, United Centerless Grinding

FEATURED SPEAKERS



Glenn Oshel - Opening Keynote
Director, Key Accounts, e-Mobility
at GROB Systems, Inc

A 34-year veteran of the automotive manufacturing industry, Glenn Oshel has been on both the buying side while at Ford Motor Company and now on the selling side at Grob Systems, thus giving him a keen empathetic insight in the dynamics of the capital equipment market. In his 27-years at Ford, Glenn managed multiple transmission programs in the US and Europe and since serves as the e-mobility account manager at Grob Systems. In this role, he has been at the forefront of leading-edge technology with all things electric mobility and routinely interacts with the entire supply chain of most electric vehicle propulsion systems and components. Glenn currently resides in the Detroit area with his wife, Carol, and son, Samuel.

NETWORKING THAT BUILDS BUSINESS

An influential conference for growing your business.

Tuesday, October 25 – Friday, October 28 / Kansas City, MO



Cliff Waldman
CEO, New World Economics

Cliff Waldman, New World Economics CEO, has been an active and in-demand public speaker on topics ranging from the U.S. and global economic outlooks to new markets, productivity, and automation. While he has spoken throughout the US, he has also appeared in Germany, Canada and South Africa. Cliff has made appearances at events on Capitol Hill and in major think tanks. He is the host of Manufacturing Talk Radio's "Cliff Notes on the Global Manufacturing Picture" which is now in its fourth year.



Andrew "The MFG" Crowe
Founder, The Manufacturing Renaissance

Often referred to as the Leader of the New American Manufacturing Renaissance, Andrew is one of the leading minds and movers on the front lines in the critical battle of closing the workforce and skills gap in the Manufacturing Industry. He is one of the most sought after speakers and consultants in this space, teaching Manufacturing Industry Leaders how to reach, hire, and retain the next generation of the manufacturing industry.

**FOR A FULL LIST OF SPEAKERS
AND TO REGISTER TODAY**

www.manufacturingengage.org



Why Machine Shops Need to UP Their Game

The importance of adopting the latest in shop management software

With increasing demand for North American machine shops due to re-shoring and strong demand for durable goods, it's imperative that shops step up to the plate to help increase their own capacity and competitiveness, and that of the machining industry in North America.

There has never been a time where digital transformation and the incredible efficiencies and cost savings have been so critical to individual shops and to our industry as a whole. Shops that have led the way in this transition are increasingly pulling ahead of their peers, taking more market share,

making more profit, and ensuring their long term success.

The gap is just getting wider between shops that have and have not made the leap. have not made the leap. If the industry sees a softening in the coming years, those efficiencies will only become more apparent as those who have adopted modern technology will be far more resilient.

Come learn from a panel including three NTMA members, Andrew Reinwald with Ripley Machine & Tool, Hernan Ricaurte from Ricaurte Precision and



Kevin Beach of R&D Manco, along with a co-founder of ProShop ERP, Paul Van Metre who will moderate the session. In this webinar we'll explore the specific steps that leading shops are taking to dramatically cut lead time, overhead costs and setup times while boosting throughput, market share and profitability.

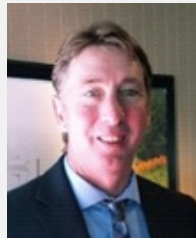
You'll learn how using some of the latest tools in shop management can assist with going completely paperless, eliminating tribal knowledge, and more proactively managing things like cutting tools and work instructions, thereby helping shops boost productivity by 25% or more.



Paul Van Metre



Andy Reinwald



Kevin Beach



Hernan Ricaurte

25%

Increase In Productivity

By using the latest shop management tools

DON'T MISS THIS EVENT

After registering, you will receive a confirmation email containing information about joining the webinar.

NTMA Manufacturing & Technology Team Webinar
September 23, 2022 - 2:00pm ET



REGISTER HERE

<https://attendee.gotowebinar.com/register/5483186846968060685>

NTMA & AMT TECHNOLOGY AWARDS NOMINATIONS NOW OPEN

The NTMA and AMT Technology Awards are designed to recognize and share excellence for those whose use of technologies are strengthening the precision manufacturing industry.

There are two award categories:

- *Technology Excellence Award*
- *Leadership and Culture Excellence Award*

If you would like a nomination form for either category, please visit: <https://ntma.org/resources/ntma-awards>.

Submission Deadline is December 2, 2022

WINNERS IN EACH CATEGORY RECEIVE:

- Social media exposure on NTMA and AMT platforms
- Featured Article in The Record
- Recognition at the MFG Meeting - Spring 2023
- Free Registration and Hotel at the MFG Meeting
- Plaque to be given out at MFG Meeting
- If applicable, National Associate Member (NAM) to provide social media exposure for winner
- Hosted webinar in 2023



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“

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JEFF JACKSON
Business Development Manager

Moseys

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