

## Attracting and Keeping a Winning Team:

*In 2018, innovative workforce development and retention matters.*

### Inside this issue

#### LET'S GET SOCIAL:

Digital tips for engaging your next generation of talent. - p.6

#### THE MFG MEETING 2018:

This year's highlights. - p.14

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How one company built the workforce it needed. - p.17

**75**  
YEARS  
MADE  
STRONG

**NTMA**





# 2018 EVENTS

## LEARNING

Software Bootcamp • Cleveland, OH • May 10—11  
Big Hairy Audacious Growth Conference • St. Louis, MO • June 6—8  
Emerging Leaders Roundtable • Nashville, TN • August 23  
Plant Managers Roundtable • Cleveland, OH • September 24—25  
Financial Managers Conference • Dallas, TX • November 7—9

## GLOBAL

Japan Tour • Japan • April 22—28

## NETWORKING

Chapter Leadership Summit • New Orleans, LA • January 28—30  
MFG Meeting • Miami, FL • March 7—10  
Emerging Leaders Conference • Pittsburgh, PA • April 30—May 2  
Fall Conference • Denver, CO • October 23—26

## ADVOCACY

Legislative Conference • Washington, DC • April 16—18  
NRL Competition • California, PA • May 18—19

## NTMA NEWS

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LOOK FOR THIS SYMBOL THROUGHOUT THE ISSUE FOR STORIES  
RELATED TO THIS MONTH'S FEATURED TOPIC.



NATIONAL TOOLING AND MACHINING ASSOCIATION

## 75 YEARS OF MANUFACTURING SUCCESS AND EXCELLENCE



In 2018, the National Tooling and Machining Association is celebrating our 75th Anniversary. We'll share stories, information and the history of the organization throughout the year. Do you have something that you would like to share? Please contact Kelly LaMarca at [klamarca@ntma.org](mailto:klamarca@ntma.org) with any stories, photos or ideas. We look forward to celebrating our diamond anniversary together!



## WELCOMES NEW MEMBERS

**GS ENGINEERING**  
Western Lake Erie Chapter  
Grigoriy Grinberg  
6421 Monclova Rd  
Maumee, OH 43537-9760

**HARBISON-FISCHER, INC.**  
**A DOVER CORP. COMPANY**  
North Texas Chapter  
Sandra Ford  
901 North Crowley Road  
Crowley, TX 76036-3739

**JECO PLASTIC PRODUCTS, LLC**  
Indiana Chapter  
Craig Carson  
885 Andico Road  
Plainfield, IN 46168-9659

**MAUMEE STAMPING AND ASSEMBLY**  
Western Lake Erie Chapter  
Jim Young  
920 Illinois Ave  
Maumee, OH 43537-1716

**OHIO BROACH & MACHINE CO., INC.**  
Cleveland Chapter  
Christopher Van De Motter  
35264 Topps Industrial Pkwy  
Willoughby, OH 44094-4638

**PRATT (FORT WORTH CORRUGATING), LLC**  
North Texas Chapter  
Brittany Gilliam  
3300 High River Road  
Fort Worth, TX 76155-1902

**SANKS MACHINING, INC.**  
St. Louis Chapter  
Dustin Sanks  
22991 Ruschaupt Road  
Staunton, IL 62088-4410

**SPECIALTY TURN PRODUCTS, INC.**  
Arizona Chapter  
Vincent Vendittelli  
3020 S Park Drive  
Tempe, AZ 85282-3158

**TRIDECs CORPORATION**  
San Francisco Bay Area Chapter  
Frank Schenkhuizen, Jr.  
3513 Arden Road  
Hayward, CA 94545-3907

**W.S. ANDERSON ASSOCIATES**  
Western Massachusetts Chapter  
Rich Shea  
303 Washington St #313  
Auburn, MA 01501-3245

**WAPLES MANUFACTURING**  
North Texas Chapter  
Darryl Smith  
8900 Forum Way  
Fort Worth, TX 76140-5017



Experience live demos from experts and get in-depth  
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# SAVE THE DATE!

## Software Bootcamp

May 10-11, 2018  
Cleveland, OH

## Limited spots available!

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to tour **Jergens**

Contact Kristen Hrusch for more information:  
[khrusch@ntma.org](mailto:khrusch@ntma.org) or 216-264-2845





## PRESIDENT'S UPDATE

DAVE TILSTONE / NTMA PRESIDENT



This edition of the Record is devoted to workforce development and retention. As many of you know, the Mission of the NTMA includes three pillars: Network, Learn and Advocate. Learning is the focus of much that we do at the NTMA and I cannot think of another more pressing issue to our members than having a skilled work force. Our association was founded 75 years ago for this very reason, and it's especially relevant today as the manufacturing business climate continues to be strong. Although I haven't seen any data to support this comment, my conversations with members indicates that the lack of available skilled labor is, or will shortly be, hampering the ability of U.S. manufacturers to fulfill future demand. This will place increasing pressure on capacity utilization and drive members to find ways to increase productivity. This will also put pressure on wages and the supply chain with the latter resulting in higher pricing. Some of the problems can be addressed with new and more productive equipment and automation, but skilled labor is still needed regardless.

Fortunately for NTMA members, we have NTMA-U. The program continues to be one of the most valued member benefits. At the MFG Meeting, the 2018 strategy was presented and approved by the Trustees. A key initiative involves upgrading NTMA-U and utilizing NTMA-U as the platform

for sustainability. For now, the NTMA-U classes can be accessed through Chapter portals or through the NTMA National portal. The NTMF approved grants of \$2,500 for Chapter portals through March 31, 2018, and a renewal for another year has been proposed for their approval. Many of our members are utilizing NTMA-U as their primary educational program for new hires and existing employees. It is the only on-line tool and die apprenticeship program in the US. Included in every portal is the NTMA Mechanical Aptitude Test. It is one of the best ways to assess the ability of a potential employee to learn the skills needed. For existing employees, NTMA-U courses are frequently utilized to improve the skills needed for advancement, or to train employees for current and future jobs. In this way, it is an excellent retention tool.

The Education Team is in a beta test phase with a pre-apprenticeship program. This program is designed to help members establish a training program for employees. It includes a textbook that corresponds to lessons within four NTMA-U courses, as well as guides for hands-on activities that only require a computer, a desk, a pen and paper. Penn United, a long standing NTMA member dedicated to training, developed the base program for their employees and apprentices from their local tech school. Scott Covert is Penn United's Training Coordinator, and started as the Education Team Leader in January 2018. He is providing valuable feedback to the team as he tests the program before it is formally

launched. Stacey Schroeder, NTMA's director of Workforce Development, will be introducing this with Scott at the Emerging Leaders Conference in early May for their input and feedback.



The NTMA-U upgrade program is a major undertaking with updates to the production and audio quality, learning objectives, assessments and alignment to key competencies. The intent is to make it easier for the student to learn and utilize some of the best teaching technology offered on an e-learning platform. The NTMA-U business plan is being prepared with the support and input of the Education Team while RFQ's are being reviewed for some of the most popular courses. It could take about 2 years to fully update all of the courses in NTMA-U but the end product is expected to be worth the wait.

DAVE TILSTONE / NTMA PRESIDENT

*Dave Tilstone*



# THE RECORD

## OPERATIONS & EDITORIAL

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Molly West, Editor

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## ADVERTISING INQUIRIES

To advertise in *The Record*, or for information on publishing your corporate newsletter or sales literature, contact NTMA at (216) 264-2847 or [mgilmore@ntma.org](mailto:mgilmore@ntma.org) for advertising, [mwest@ntma.org](mailto:mwest@ntma.org) for editorial content.

Layout by Z Graphics  
[dave@DaveZgraphics.com](mailto:dave@DaveZgraphics.com)



## NATIONAL TOOLING & MACHINING ASSOCIATION

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## FEATURE

# THE WORKPLACE ECOSYSTEM

BY STACEY SCHROEDER, NTMA DIRECTOR OF WORKFORCE DEVELOPMENT



The theme of this issue of *The Record* is innovative workforce development practices, and I would like to offer that these are part of a broader ecosystem at a company.

Consistent, respectful and intelligent human resources practices and leadership are the foundation for a culture and environment that allows for great training, excellent retention and an empowered workforce that helps drive business results. This article will cover a number of HR topics with perspectives on why they are useful, and how to achieve the changes at your company.

Many HR policies and procedures have outlived their usefulness. Think about how company tenure has changed – it's rare to have 'lifers' that move incrementally up the ladder. However, succession planning, annual performance reviews and workforce planning are still often based on long time horizons. Agile methodology has worked its way into many aspects at companies of all sizes, and HR is not (and should not be) immune.

Shorter-term projects with ever-changing teammates and bosses means that more

SEE "ECOSYSTEM" PAGE 7

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## TWEETING YOUR WAY INTO EMPLOYEE'S HEARTS:

WHY MANUFACTURERS NEED TO MASTER DIGITAL COMMUNICATION TODAY



The social media revolution is no longer coming – it's here. Today, digital communication methods such as strong websites and dynamic social media accounts – on Twitter, Facebook, LinkedIn, YouTube, Instagram and more – are an increasingly critical part of building and maintaining a successful business.

In recent years, NTMA's One Voice team has dedicated time and resources to developing the presence of One Voice for Manufacturing and NTMA online. (Look for us at @OneVoiceforMfg and @NTMATalk on Twitter). NTMA member companies are taking action, as well. About 20% of One Voice members use Twitter for business and about 35 percent are using Facebook for business. Those numbers grow every year.

These efforts are reflective of the changing answer to the threshold communication and marketing question: "Who is our audience?" More and more, every audience is made up of millennials. While definitions vary, millennials are widely considered to be people born after about the year 1980. Several years ago, the number of millennials in the U.S. population officially exceeded the number of Baby Boomers. It is anticipated that, by the year 2020, millennials will account for one in three American adults. And by 2025, millennials will be three-quarters of

working-age Americans.

Statistics like these are critically important for an American manufacturing industry facing a serious talent shortage. Advancements in technology have created more high-skill opportunities and retirements are adding more open positions every day.

Millennial job searchers have unique strategies for finding work. And, perhaps more importantly, they also have distinct opinions about their work environments. Millennials consistently report a preference for going online to look for opportunities. And the positions that they want? Inclusive team cultures with people working to solve complex problems.

That's good news for manufacturers. With potential employees turning online for career insights, companies should seize opportunities to spread the important – and too often unheard – message that the U.S. manufacturing sector offers interesting, challenging, world-changing careers.

For one example, look no further than the current advertising campaign of industry giant, GE. In each ad (which are all available online) the main character offers some variation of the phrase, "I'm going to transform the way the world works." The ads attempt to rebrand the company as "digital industrial," placing it at the forefront of leading innovation and the frontlines of tackling the

world's toughest problems.

Of course, most manufacturers don't have a GE-level advertising budget. But, thanks to social media, you don't need one. Here are three steps manufacturers can take right now to help tell a better story to millennials on the job market:

**1. Adjust your narrative.** Whether it's the text on your company website or the description in your Twitter bio, make sure the story you are telling is the one you want potential employees to hear. Incorporate the ways in which your work impacts the world and your company touches the lives of others.

**2. Share your highlight reel.** Doing cool work? Talk about it! Provide an insider's view into the work you do, the products you make, and the ways you are making a difference (within the limits of confidentiality, of course).

**3. Get personal.** Celebrate your employees' accomplishments, share pictures from company outings and events, and encourage others to spread the word that your company is a great place that is doing great things.

Times are changing, and change can be a challenge. But manufacturers are not ones to back away from a challenge. With the right strategy and consistent implementation, manufacturers can shine online.



"ECOSYSTEM" CONTINUED

feedback, more often, from more people will lead to much better results than an annual lookback from one person removed from the day-to-day work. Providing crisp, actionable feedback is a skill, and isn't acquired simply by gaining a title of supervisor, manager or leader. Training leaders at all levels on coaching, giving and receiving constructive feedback and handling difficult conversations is available through many sources. Some I recommend are the 'situation behavior impact' model which has free resources online, Crucial Conversations (books, classes and videos), as well as the results of your searches online or at local educational institutions. I would also encourage you to consider new ways to give positive feedback such as spot bonuses, a gift card or a lunch outing, etc. Compensation works best as a motivator when it happens as soon as possible after the desired behavior.

A corollary to the points above is that it's critical to pick the right people. In today's cross-functional, fast-paced companies, it's important to have solid people skills. There will always be differences of opinion, conflict, competing priorities and stress. Using specialized interview techniques, personality assessments, and good judgement can help prevent the addition of a candidate that won't be a

good fit. The STAR method of interviewing, along with questions designed specifically to tease out a candidate's emotional intelligence are highly recommended. There are a variety of free or low-cost personality or aptitude assessments available, and don't neglect calling references and checking out their social network accounts.

Another key enabler of business results is pushing decisions down to the most appropriate level in the organization. By empowering people with the best information and knowledge with the authority to make a decision on a particular topic, the process is streamlined and people feel engaged with their role in the results. Depending on how far of a departure this is from current company culture, it may take many months of leading by example (and not taking punitive action against decisions that didn't turn out exactly as planned) before employees feel comfortable making decisions. The coaching and feedback skills mentioned above are another key enabler to empowered decision making.

Paying appropriately for performance, location and the role are also critical. People have access to more information than ever before, and some of the norms about sharing salary information are changing. There

are plenty of ways to do market research, and the NTMA also offers the Wage and Fringe survey as a member benefit.

There are many vendors and options in the training and development space. I encourage you to think of it as more than a budget line item – use your time, dollars and energy in the most effective way possible. Identify the technical and soft skills that each role needs, assess individuals to determine their gaps, and fill those gaps with a mix of 70 percent on-the-job training, 20 percent coaching and mentoring and 10 percent formal training (classroom or online). If a training provider promises to deliver results without doing an analysis of needs or talking to the individuals and their managers – don't sign on the dotted line. Like any sort of development, it requires reflection and analysis of the current state before improvement can be achieved.

As always, I welcome your feedback and suggestions. Do you have resources that you would like to share on any of these topics? Do you have a success story with some lessons learned that might help other members? Please contact me at [sschroeder@ntma.org](mailto:sschroeder@ntma.org).




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## MANUFACTURING IS ALL ABOUT THE HUMANS

BY BILL PADNOS, NTMA DIRECTOR OF YOUTH ENGAGEMENT



Imagine picking up your local paper and reading these headlines:

***Manufacturing Industry Helps Young Person Rise Above a Hard Life to Achieve a Skilled Career***

***Career as a Machinist is Challenging, Rewarding for Mother (Father) of Two***

***My Success is Simply a Matter of Working Hard and Grabbing the Breaks When They Come***

***Machine Shop President Continues Company's Legacy of Supporting Local Students***

***Machinist Overcomes Fears, Perseveres to Secure a Good Life for Her Family***

***Manufacturing Engineer Credits the NRL and Industry Mentor for Success in Industry***

***Machinist Apprenticeship Program: My Way to a Post-Secondary Education without the Debt***

At the membership luncheon at this year's MFG Meeting,

NTMA's Chairman Mark Vaughn shared with the audience an inspiring story about an emerging leader at his company. Mark was beaming as he told us about how this employee has risen through ranks into a new management position. He pointed out that this 29 year-old has no college debt, an industry-certified education, a beautiful family and most of all, a bright future.

Later in the conference, I was talking to an NTMA member who was telling me about the vacations that he and his wife have already gone on this year. I wish that I was able to go to the amazing places that they visited. Also, I remember overhearing a spouse of an NTMA member discussing the high-end Cadillac Escalade that she is planning to purchase. On top of that, a new member was telling me that he has gone from growing up in South Central LA to owning a manufacturing company.

Why am I writing about news headlines and personal stories of NTMA members and their employees? It is because we need to communicate them to the students and parents in your community. While people are afraid that manufacturing is being taken over by automation, we all know that the heart of industry is about the humans in it. Human interest stories sell newspapers and increase clicks to a web site. And, it will help to engage more students and their parents to consider manufacturing as a viable career option.

Over the next two months, thousands of students will be participating in NRL competitions across the country. These students, their parents and the fans in the stands need to hear your success



stories. This is the time to share about an employee that has risen through the ranks and how proud you are of him/her. We know that the story we heard from Mark about his employee at Vaughn Manufacturing Company is one of many. The only reason why we know about it is because he told us and subsequently, inspired the entire audience to be proud of being NTMA members.

The Manufacturing Institute Skills Gap survey stated that a young person would be twice as inclined to pursue a career in manufacturing if his or her parent works in industry. However, most of those parents are not employed by manufacturing companies. Therefore, they do not know first-hand about the benefits of working in manufacturing. The students and parents will only know if you tell them yourself.

Do you have a company video that highlights your employees and the benefits of working at your facility? If yes, then save it to YouTube and send me the link (bpadnos@ntma.org) so we can showcase it at the NRL Competitions. Do you have an amazing story about yourself or your employee? Visit the NRL web site at [www.gonrl.org](http://www.gonrl.org) and fill out the Tell Us Your Story online form.

Manufacturing is all about the humans, not the machines. People don't just want to hear about the new 5-axis CNC machine you purchased. People want to also hear about how you were able to gain the technical skills to use it, and your pathway to earning those skills. Share them in person, on video or in writing on the NRL web site. It is your choice as to how to share, but not on whether or not you should. That answer to that is "Yes, please."



# SAVE THE DATE!



**Event Features:**

June 6 – Evening welcome reception with networking  
June 7 - Full day of education sessions and a plant tour  
June 8 – Half day of education sessions

**Big Hairy  
Audacious Growth  
Conference**

June 6-8, 2018  
St. Louis, MO



**Contact Brittany Belko to Register:  
bbelko@ntma.org or 216-264-2848**





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## BACHMAN MACHINE CO.: A FOUNDING DELEGATE OF THE NTMA

Bachman Machine Company, St. Louis, Missouri is celebrating its 90th anniversary. It is proud to be one of the founding member companies of NTMA. The family owned firm has three departments for production metal stamping, tool and die, and production machining. The company is ISO/TS 16949 and ISO 9001 certified. Three generations of the Bachman family have worked at the company with some of the 4th generation just starting. A crew of 70 employees operates in an 83,000-sq.-ft. facility.

A subsidiary, Plastics Molding Company, provides plastic injection molding and is located next door. The Tool & Die Design & Manufacturing department has design engineers

and designs and builds dies (up to 48" x 144") and has been doing this since 1927. Industries served include: automotive, appliance, electrical construction, industrial, consumer, aerospace, defense, lawn/ garden and medical. The Production Metal Stamping department has extensive expertise and a wide range of presses. It is committed to quality and has annual DPM's comfortably in the world class range. It can handle ferrous to non-ferrous metals, and simple to complex metal stampings (including deep-draw) while utilizing twelve punch presses ranging from 60 to 1000 tons.

The Production Machining department's equipment and crew are best suited for tight tolerance, multi-sided work pieces,



(L-R): Bill Bachman, Brian Bachman and Terry Aslin.

An example of Bachman's engineering and stamping expertise.



One of several stamping presses at Bachman Machine Co.



yet still provides machining up to 20,000 RPM and maintains extremely tight tolerance variations. Bachman Machine Company's CNC production machining division is a full service supplier of the highest quality for low, medium, and high-volume production.

The company continually works with four area technical schools and the NTMA to promote career opportunities at Bachman and in the industry.

Bachman Machine Company can be contacted at:

4321 N Broadway, St  
St Louis, Missouri 63147  
Phone: (314) 231-4221  
Fax (314) 231-4571  
[www.bachmanmachine.com](http://www.bachmanmachine.com).



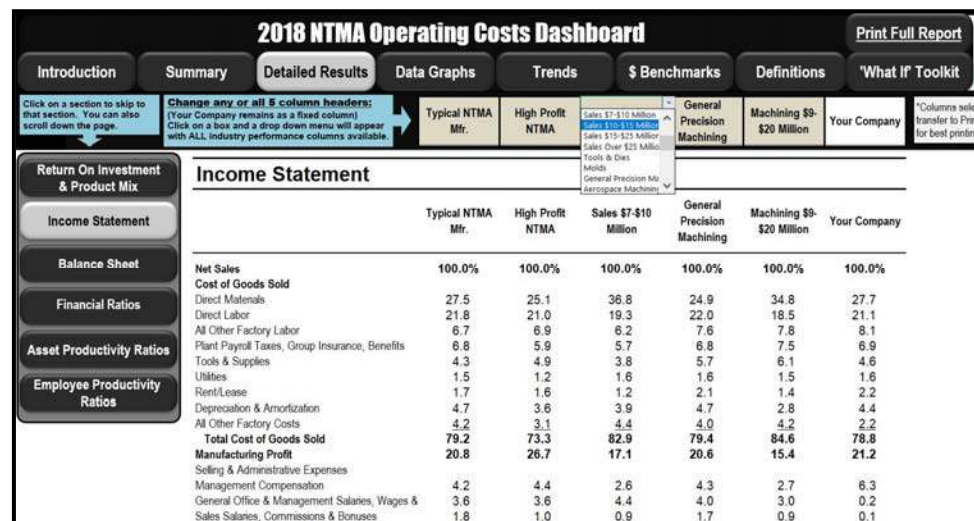




## Operating Costs Report Excel® Dashboard

The NTMA Operating Costs Report provides participating members with detailed financial results of precision machining manufacturers. This management tool is designed to provide the resources that enable NTMA members to evaluate, plan and better manage their business.

***All information is strictly confidential with Mackay Research Group.***



### Customize Your Report

The Operating Costs Report, delivered in an Excel® Dashboard, provides participating NTMA members with leading edge insights, intelligence and capabilities. The program was designed with maximum flexibility in mind, so manufacturers can slice and dice specific performance results in ways that are most useful to them.

### Performance Scorecard

An executive summary provides a high level overview of a company's overall performance. The *Performance Scorecard* gives you a quick glance at how your company measures in performance to participating industry peers. Areas of strength and limitations are graphically displayed.

A more detailed examination of the ORR Dashboard allows participating members to compare their data, year-over-year, while measuring their performance against industry benchmarks, in confidence and with total security - **all at no cost to NTMA members!**

### Personalize Graphs, Benchmark by \$'s, 'What If' Forecasting...

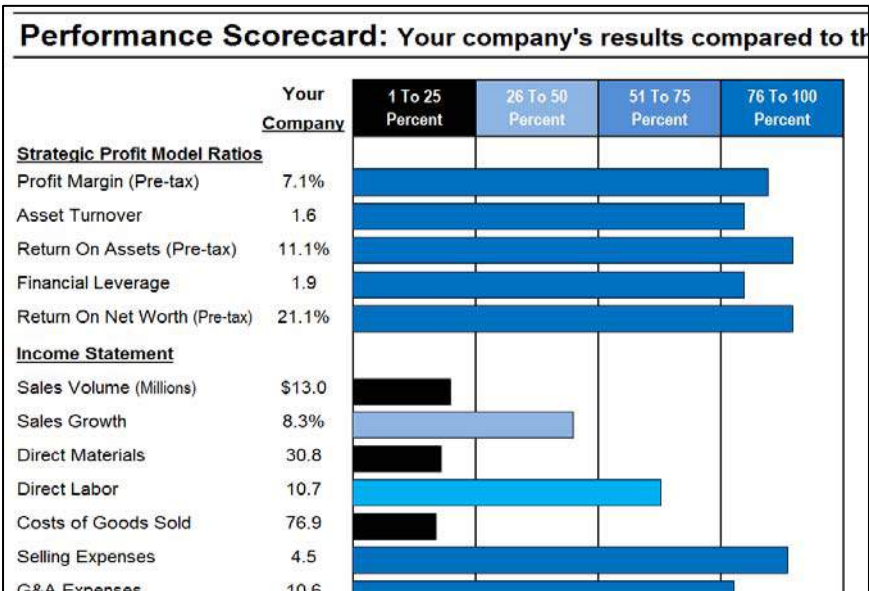
Graphs in the Dashboard allow you to choose which ratios or line item benchmarks to graph your performance against. And, again, you can slice and dice specific graphic results in ways that are most useful to you.

The "\$ Benchmarks" tab demonstrates what typical and high profit dollar amounts in the income statement and balance sheet would be if they were exactly the same sales volume as your company.

The "What-If" tab gives you insights into multiple scenarios for sound business planning. It allows you to change certain measurements (sales, units, expenses, etc.) to see how your company could improve.

**Participate in the Operating Costs Survy by May 1<sup>st</sup> for your customized Dashboard!**

Contact Taylor Mackay with Mackay Research Group, [taylor@mackayresearchgroup.com](mailto:taylor@mackayresearchgroup.com)



## NTMA TECHNOLOGY AWARDS

The 2018 Technology Award recognizes NTMA members who are working to advance their company and our industry with the implementation of technology and best practices.

**THE TECHNOLOGY AWARD IS GENEROUSLY SUPPORTED BY THE AMT THROUGH THE FUNDING OF THE CASH AWARD THAT IS INCLUDED FOR THE WINNERS.**

The NTMA Technology Award has two categories, each with specific criteria to be considered for the nomination.

The award categories are:

- **TECHNOLOGY**
- **BUSINESS/CULTURAL PRACTICES**

The NTMA Technology Team solicited nominations from chapters, technology team members and national associate partners. Applications were reviewed and the merits of each discussed.

**CONGRATULATIONS TO THIS YEAR'S WINNERS, RECOGNIZED AT THE MFG MEETING:**

**CATEGORY 1: Technology**

Winner: Fredon Corporation



**CATEGORY 2: Business/Cultural Practices**

Winner: Acutec Precision Aerospace



Rich Ditto -Fredon (L), Gillen Young – Tech Team Leader (C) , Chris Smith - Acutec (R); Gillen Young, Manufacturing & Technology Team Leader presents the Technology award to Fredon and the Business / Cultural Practices award to Acutec.



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BIG Kaiser presents NRL with a check for \$5,150. BIG Kaiser donated 2% of their November and December sales to the NRL. This was Big Kaiser's 2nd year providing these donations to the NTMA!.



The Franklin Partnership presents Mark Vaughn with a letter from Donald Trump, welcoming NTMA to this year's MFG Meeting



The Franklin Partnership & Bracwell present to attendees. Thanks to all the attendees that helped us raise over \$27,000 in PAC donations.

Special thanks to alliantgroup for hosting our 2nd annual Membership Luncheon and to Royal Products for sponsoring our First Timer's Reception.



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**Early Bird Registration ends April 6, 2018**



[in](#) NTMA - Emerging Leaders Group  
[t](#) #NTMAEL2018





## HOW RISING CAPACITY COSTS WILL AFFECT YOUR ENERGY BILL

SUBMITTED BY APPI ENERGY

Capacity costs, which typically are the second highest contributor to the overall cost of energy supply, are dramatically increasing throughout much of the United States. In the Pennsylvania-New Jersey-Maryland (PJM) grid, capacity costs are expected to increase roughly 30 percent as of June 2018. This increase is the result of coal generators, which are struggling to remain operational in the modern era, continuing to shut down. Natural gas generation is on the rise, but it is more variable and less easy to transport than coal, meaning that some power grids are finding themselves having to pay more to ensure reliability.

But first, a brief discussion as to what capacity costs are. Essentially, capacity cost is a price paid to ensure that variable availability of power sources will not result in blackouts or brownouts, even on the hottest or coldest days of the year. That's achieved through a capacity market, or a capacity auction, whereby a capacity rate is established to pay power generators for contributing their power to ensure reliability on the grid. The energy supplier (also known as a Load Serving Entity) charges customers based on their usage and the capacity rate. That fee is then remunerated to the power grid organization, who uses it to pay the generator. Ultimately, this means that the consumer is usually responsible for the cost of capacity, in some form.

Customers can reduce their capacity costs via peak load reduction. Though capacity rates cannot be controlled by a customer, the capacity tag (a measure of total kilowatt-hours used by a facility during the peak hour of the peak day in a region) is possible to adjust. That peak usage sets a customer's individual capacity tag for future capacity years. By reducing power during peak usage days (periods of extreme cold or heat), capacity costs can be mitigated in the next year.

However, certain energy supply contracts (such as the type APPI Energy negotiates on behalf of its clients) are what's known as "fixed, all-inclusive" contracts.



This kind of contract seeks to create one price for components of energy supply costs, including capacity, transmission, and reliability-must-run (RMR) charges. This kind of product provides the customer with budget certainty, and lowers risk.

There exists some concern that rising capacity costs might influence a shift from these fixed, all-inclusive contracts. Increases in capacity rate are one of several events that suppliers may classify as a "change-in-law", a standard provision in most energy supply contracts (even fixed, all-inclusive contracts) that establishes a way for suppliers to recoup increased costs by passing through that increase to their customers. It's up to each individual supplier to decide whether or not to pass-through these costs, although they have the legal right to do so.

At least one major energy supplier intends to address this quandary by modifying their fixed price product to pass through all capacity, transmission, and RMR charges at market rates. Essentially, this shifts risk back to the customer, while limiting the amount of change-in-law interactions the supplier has to have with the customer. A customer might end up paying more or they may end up paying

less, but the end result is an increase in the assumption of risk by the customer, and importantly, provides them with less budget certainty.

APPI Energy is committed to transparency and providing our customers with the data to make informed decisions. Our preference is to present our clients with fixed, all-inclusive products where capacity, transmission, and RMR are established within the one price. Given the variability and wide spread of prices in any given market, we find that having one price to compare is the only way to accurately present a customer with a green-apples-to-green-apples choice. Therefore, if a supplier we work with chooses to abandon the fixed, all-inclusive product we typically offer, we will make our customers aware during our consulting process.

If you have questions about capacity, and wish to examine how your business may be affected by rising capacity costs, please contact us via our website, or call 800-520-6685 to speak with us directly. We will be happy to analyze your bills and provide expert recommendations at no upfront cost or obligation.



## HOW ONE COMPANY TACKLED THE SKILLS GAP HEAD ON

BY SCOTT COVERT, NTMA EDUCATION TEAM LEADER, TRAINING COORDINATOR, PENN UNITED TECHNOLOGIES



Workforce development. We hear that phrase thrown around a lot. What does it really mean? To a lot of businesses, it simply means training their workforce to efficiently do the tasks that their company needs done. But, in today's manufacturing environment, I think workforce development has a much broader meaning. I believe it not only refers to the workers that you already have, but also to your future employees. Let's face it, the skills gap is real, and it is not going away anytime soon. Manufacturers everywhere are competing for the small number of skilled workers that are in the job market. This is forcing us to get creative in our search for good employees. We at Penn United Technologies have decided to take a very proactive approach when it comes to workforce development. It all started after I attended a business and education meeting.

Manufacturers were seated on one side of the room, and educators were seated on the other. Wisely, all sharp objects were left on a table in the hallway. OK, I may be exaggerating a little, but not much. The conversation went something like this: Manufacturers would say to the schools "you are not teaching students what we need them to know to be productive and knowledgeable manufacturing employees." The schools would counter with "we are tied to Common Core standards and state standardized tests, and don't have the time or budget to teach anything else." The volume increased as faces reddened. If



you have ever sat through one of these meetings, you know what I am talking about. It was after one of these meetings that I went to our H.R. Manager and told him that we as manufacturers had it all wrong. We did not have an education problem, we actually had a manufacturing problem. We, as manufacturers, are the ones who need the trained personnel, and we, as manufacturers, understand what we need our perspective employees (students) to know. So who better to take the lead in educating our students than the manufacturers themselves? It was at this point that I explained to our H.R. Manager about a pilot program I had been thinking about.

I proposed a program where we would invite high school seniors who would like to enter the workforce immediately after graduation to our facility and teach them the basic

manufacturing skills needed for the entry level jobs that we, and many other manufacturers in our area, had available. This was the birth of our Students Acquiring Technical Skills program. (S.A.T.S.). This pilot program was a huge success, and has since spread to include students at nine local high schools, as well as those being home-schooled or attending high school online.

Building on the success of this program, we strengthened the curriculum to create a basic manufacturing skills pre-apprenticeship program. We offered this program to local veterans, dislocated workers and unemployed and under-employed members of our community. We offered both of these programs to our local students and community members free of charge. As the popularity of our programs grew and employers began calling

to ask about hiring our graduates, we had the opportunity to partner with our local manufacturing consortium, and our community college to reach even more community members. With the help of our local Workforce Investment Board, our partnership has been able to use grant funding to offset the costs of running both programs. Although we teach the courses at Penn

United, and hire from the

classes, we also offer local manufacturers the opportunity to recruit as well.

Currently 70 percent of our pre-apprentice graduates are employed by the end of class. The bottom line is that by thinking outside the box, we were able to create a pipeline of skilled entry-level workers to fill many of the open positions that exist in our company and our community. Through partnerships with all interested parties, this type of program can easily be recreated. While skilled job seekers may be hard to find, there are a lot of good, hard-working people out there hungry for the skills needed to start a new career. Find those people and feed their hunger. Your company and your community partners will reap the benefits.







## THE INDIANA CHAPTER NTMA HOSTS SUCCESSFUL MACHINING COMPETITION

INFORMATION SUBMITTED BY ALICE OVERTON



The Indiana Chapter of NTMA held its 15th Annual Machining Competition in February.

The chapter hosted 28 contestants: 22 for manual machining and 6 for the CNC competition. There were more than 90 people in attendance, with a dozen Indiana high schools involved.

The top three winners in both categories received tool boxes, tools, scholarships, as well as other items.



## MANUFACTURING ADVANCED EXPO

SUBMITTED BY TAMI ADAMS, EXECUTIVE DIRECTOR, NORTHWEST PA CHAPTER



The Manufacturing Advanced Expo is coming to Erie May 10 to showcase the latest manufacturing technology for regional manufacturers. More than 30 exhibits will feature and demonstrate the latest innovations, including collaborative robots, machine safety, energy saving solutions and more. The day will also include educational sessions on technology solutions to improve processes and operations. This free event is scheduled for May

10 from 12:00-5:00pm at the Ambassador Conference Center in Erie, Pennsylvania. Hosted by the Northwestern PA Chapter of National Tooling and Machining Association (NWPA-NTMA), Northwest Industrial Resource Center (NWIRC), with NEFF as the Premier Sponsor. To register or get more info, please visit [www.nwpa-ntma.com/expo](http://www.nwpa-ntma.com/expo).



## PITTSBURGH CHAPTER ENHANCES APPRENTICESHIP PROGRAM

BY NEIL ASHBAUGH, NEW CENTURY CAREERS



Through a generous grant from the Pennsylvania Department of Labor and Industry, the Pittsburgh Chapter NTMA has introduced hands-on training for each of the Year 1 and Year 2 portions of the course “Technology of Machine Tools” for all three training sites in Southwestern PA.

This effort began as survey results by apprentices and instructors suggested that early in an apprentice’s education, a heavier introduction to various machines such as mills, lathes and surface grinders, is key to enriching the basic knowledge and skills needed by today’s apprentice.

“Each year, our Steering Committee conducts surveys of students and instructors to monitor and support enhancements to our program,” stated Phyllis Miller, HR Manager for Hamill Manufacturing and Apprenticeship Steering Committee Chair for the Pittsburgh Chapter. “We received feedback that we needed to provide additional opportunities for apprentices to get a better understanding of various pieces of equipment they will encounter in their careers. For years our program focused on providing the theory

portion of related instruction, and companies provided the hands-on portion. We listened to our students and felt that by adding hands-on demonstrations and exercises, in addition to what they are learning on-the-job at their employers, we could enhance the educational experience for them.”

Working with a Pittsburgh-based non-profit workforce development agency, New Century Careers, and the Westmoreland-Fayette Workforce Investment Board, a grant was written, submitted, and awarded. The awarded monies were then used to create new curriculum, purchase needed tooling, consumables, inspection equipment and raw materials, and implement the new programming for the 2017-2018 instruction year at all three sites including Northern and Central Westmoreland CTC’s, along with New Century Career’s Training Innovation Center.

“We think we’ll see a variety of positive outcomes in the future as a result of these program enhancements,” said Paul Anselmo, President and CEO of New Century Careers.

“We’ve been testing the inclusion of hands-on training at our Training Innovation Center for the past two years. Our apprentices and instructors have appreciated this more blended learning approach as it allows for a more efficient comprehension of the theoretical concepts presented in the classroom. We believe, in the long run this curricular enhancement will be a direct benefit to the apprentices as well as their employers.”

Another goal of the enhanced curriculum is to support apprentices in achieving additional National Institute for Metalworking Skills (NIMS) credentials during their time in the four-year apprenticeship program. The Pittsburgh Chapter currently covers registration and credentialing fees for all apprentices with NIMS.





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## MEMBER NEWS

NATIONAL TOOLING AND MACHINING ASSOCIATION

### U.S. SENATOR VISIT HIGHLIGHTS COMMUNITY COLLEGE MACHINING PROGRAM THAT PARTNERS WITH NTMA MEMBER, HIRSH PRECISION PRODUCTS

BY JESSICA PETERSON,

REPRINTED WITH PERMISSION FROM FRONT RANGE COMMUNITY COLLEGE

When U.S. Senator Michael Bennet, D-Colo., recently asked about visiting Front Range Community College's Precision Machining program, Director George Newman helped arrange a gathering to highlight collaboration between education and business. It's a strategy that has been key to the program's success.

"We contacted a business that we work closely with, and they arranged a formal tour of their facility—to more effectively show the senator how they partner with us to put an FRCC education to work."

#### FRCC PARTNERS WITH LOCAL MANUFACTURING COMPANY

Bennet visited Hirsh Precision Products, a Boulder manufacturing company, which has a vital relationship with FRCC's program. The company:

- Hires students coming out of the program (located at the Boulder County Campus);
- Has sent its employees to FRCC for training; and
- Has donated materials to the program.

President and CEO Mike Hirsh also serves on the advisory committee for the machining program.

Hirsh Precision began its operations in a single 10-by-10 room back in 1979. From that humble beginning, the business has now moved into a 24,000 square-foot facility that houses "some of the most advanced technology in the industry," according to its website.

#### LOCAL BUSINESSES GET SKILLED WORKERS

FRCC partners with employers like Hirsh to create the college's machining program, which opened in 2013. "This is how we like to create new programs—by working with industry leaders to identify and prioritize the skill sets they need, and then having them help us build the curriculum," said Newman.

"This kind of partnership works well for everyone," he added. "The businesses involved get the well-trained workers they need, and our students get excellent training and job prospects out of it. It's also great for the local economy."

#### FRCC TO EXPAND TO OFFER TWO NEW MANUFACTURING PROGRAMS

Bennet was curious why there aren't more programs out there like the one at FRCC. "I told him about two new programs we're developing in electronics technology and industrial maintenance," Newman said.

He told Bennet that the college wants to open a new center for integrated manufacturing in FRCC's service area. "We keep hearing from our industry contacts that there is a great need for well-trained workers with specific skills," Newman said. "Our



plan is to build a new, larger facility to house four manufacturing programs—two existing offerings and two new ones."

#### STUDENTS STEAL THE SHOW

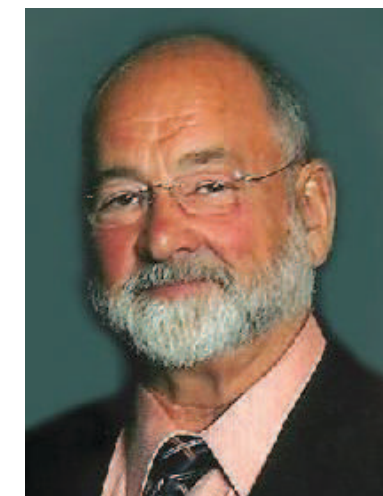
Bennet got the chance to chat with FRCC alumnus Sawyer Hayes—who is now employed at Hirsh. Bennet also asked current students Justin Williamson and Kevin Ridgway, who joined the tour, to talk about their experiences in the machining program.



### H. REID GRAYBILL REMEMBERED

On February 15, H. Reid Graybill, 80, passed away. Born in Lancaster, Pa., he was the son of the late H. Roy and Stella Hollinger Graybill. He was the loving husband of Inda Buch Graybill and they would have observed their 60th wedding anniversary on February 22nd. Reid was a 1955 graduate of Manheim High School. In 1958 Reid founded Graybill's Tool and Die Incorporated, Manheim; and was president of the corporation until 2012 when he officially retired and turned the leadership of the company over to two of his sons. He was a member of the National Tooling and Machining Association, served on the Administrative Board and was the Chairman Coordinator of the Apprenticeship Training School. Reid was a member of the Society of Manufacturing Engineers.

According to his obituary, Reid was a Vietnam veteran and a devoted member of his community. He served on the Borough Council, Borough Authority, Civil Service Commission, Manheim Area Economic Development Corporation. He was one of the founders for Manheim Central Foundation for Educational Enrichment, and also served on the Administrative Board for Fulton Bank. Other member-



ships included: Manheim Historical Society, Manheim Garden Club, Manheim Sportsman Club, 50-year member of Salem United Methodist Church, Manheim, LCBC Manheim Campus, Manheim Lions Club, Manheim and Lancaster Chambers of Commerce. Reid had a passion for the outdoors and to be anywhere near the water where he enjoyed boating, fishing, and spending time at Bethany Beach. He loved being with his family and friends on his boat cruising the Chesapeake Bay.

Contributions may be made in Reid's memory to the Manheim Historical Society, P. O. Box 396, Manheim, PA 17545 or to a charity of one's choice. To send the family on-line condolences, please visit: [www.BuchFuneral.com](http://www.BuchFuneral.com)



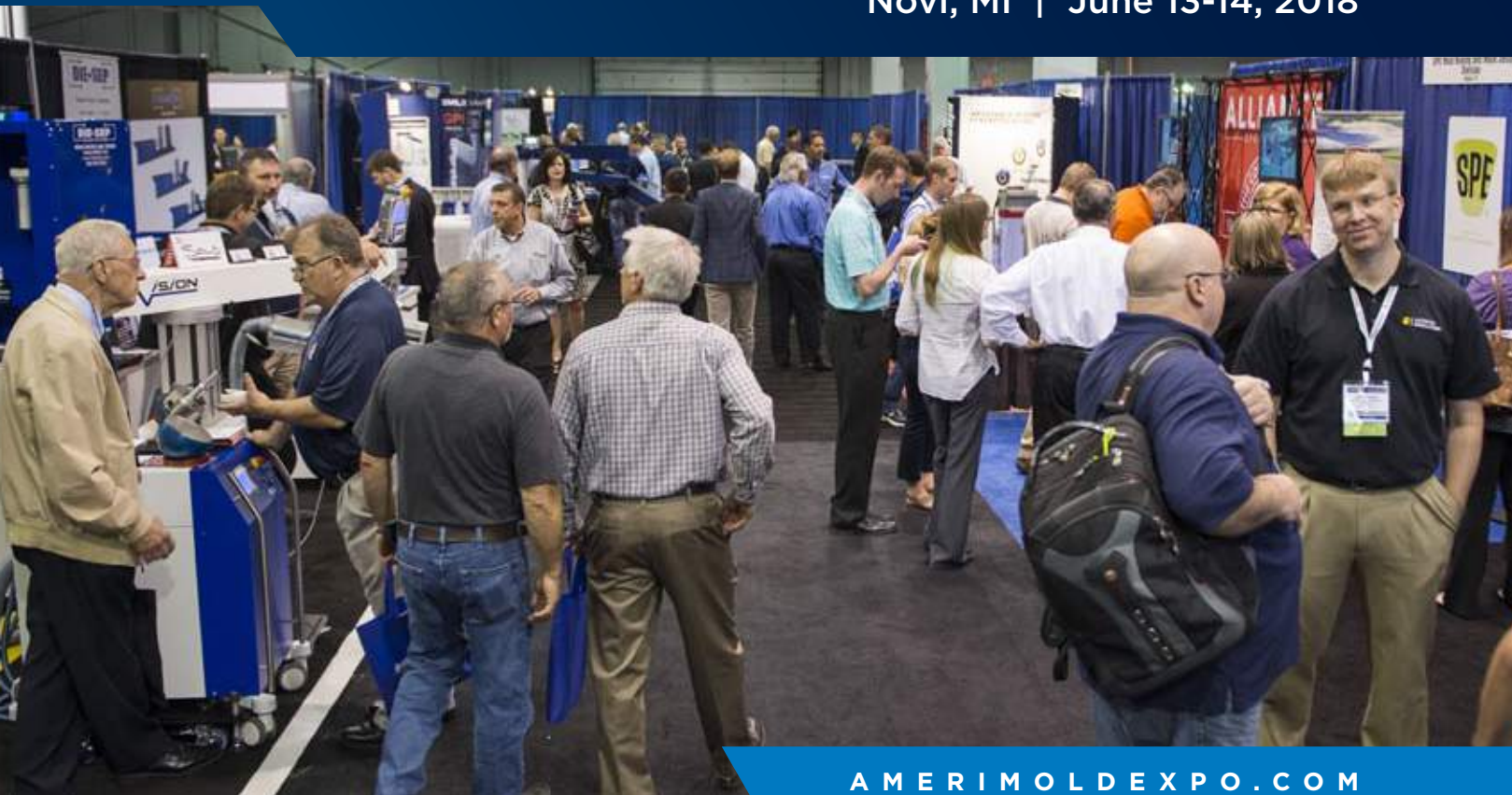


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## MEMBER NEWS

### MAJOR TOOL: DRIVING SUCCESS, ONE LONG-TERM EMPLOYEE AT A TIME

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Many people never spend 50 years in the workforce, let alone at the same company.

Indiana manufacturer Major Tool & Machine has a tradition of recognizing their long-time employees, making sure they get the credit they deserve. For years, workers with more than 20 years of service for the company have been treated to a steak dinner at a variety of Indianapolis steakhouses.

But in 2010, the company started a new tradition for employees who reach the 50-year milestone—a brand new car. And not just any new car, a Cadillac CTS.

This year, Gene Davis became the second employee to reach the milestone, and get the special gift.

Please join us in congratulating Gene on his milestone, and Major Tool & Machine for their excellent company culture!



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## MEET OUR NATIONAL ASSOCIATE: ALLIED MACHINE AND ENGINEERING

*An interview with Becky Compton, Manager of Marketing Services*



*First of all, thank you for featuring Allied Machine & Engineering this month. We are so excited to join the National Tooling and Machining Association. This group really does a remarkable job in helping the U.S. precision custom manufacturing industry through networking, advocacy, and education.*

### WHAT IS YOUR COMPANY SPECIALTY?

Allied Machine & Engineering focuses solely on creating holemaking & hole finishing tooling systems. We devote our advanced engineering and manufacturing capabilities to create the widest selection of value-added tooling available to manufacturers around the world. Whether our customers are working with cast iron, alloy steels, stainless steel, high temp alloys, aluminum or even carbon fibers, we work to deliver the lowest cost-per-hole in a wide range of drilling, boring, reaming, threading, and burnishing applications.

### WHAT IS YOUR COMPANY HISTORY? WHEN/HOW DID YOU START?

Our Ohio company was started by Harold and Lucille Stokey in 1941. We are grateful to share we are still family



owned, three generations later. In the beginning, Allied manufactured lock nuts and taper sleeve adapters for troop carriers and tanks during World War II. Over the last 76 years, Allied has developed the spade drill, invented the Blade-Loc, and patented the T-A® system. In fact, we have continued our tradition of innovation over the years and have accumulated over 40 U.S. patents. Allied has grown from our founder's garage in Ravenna, Ohio to a global company that includes brands such as Wohlhaupter,

### WHO ARE YOUR CLIENTS? WHAT TYPE OF WORK SHOULD A COMPANY CONTACT YOU ABOUT?

ThreadMills USA, Superion, and Criterion. While our corporate headquarters remains in Dover, Ohio, we have facilities in Xenia, Ohio, Evans, Georgia, the United Kingdom and Germany as well as distributors all over the world

While we are proud to serve a wide range of businesses such as high production manufacturing facilities, a lot of our customers are hard-working, blue collar machinists from independent job shops. It is not unusual for them to face new challenges with each job as they often contract orders from various industry manufacturers. When the application entails holemaking or hole finishing, that's where we shine. Whether its deep hole drilling, threading difficult-to-machine materials, boring tight tolerances, or creating mirror-like finishes, our precision engineering and expert application support make Allied the first and best choice for solving complex holemaking challenges.

contract orders from various industry manufacturers. When the application entails holemaking or hole finishing, that's where we shine. Whether its deep hole drilling, threading difficult-to-machine materials, boring tight tolerances, or creating mirror-like finishes, our precision engineering and expert application support make Allied the first and best choice for solving complex holemaking challenges.



### WHAT COMPANY ACCOMPLISHMENT ARE YOU MOST PROUD OF?

When it comes to Allied's accomplishments, we feel the most grateful to have contributed to the history of **holemaking & hole finishing solutions**. It is a legacy of innovation and we know in order to continue to be competitive we cannot rest on our laurels. That is why Allied has built lean processes and quality control into the very DNA of our manufacturing. While we invest in acquiring the best materials and equipment available as well as continuously improving our processes, we know people are the bedrock of any company's success. We've seen a lot of changes in 76 years. Allied knows how important it is to encourage continuous education as well as inspire the next generation to get excited about manufacturing. As a result, we work with the surrounding community through school curriculum programs such as Project Lead the Way. PLTW encourages youth, from grade school through high school, to experience STEM and manufacturing in a whole new light. Our college engineering internships allow students to earn college credit while gaining real world experience and we offer hands-on

learning to both new and existing associates in our state of the art training facility.

### WHAT SETS YOUR COMPANY APART?

Holemaking expertise, as that is all we do and we do it very well. If an application can't be satisfied with standard tooling, we can develop a special solution for that machinist's unique situation. In fact, we have an entire department of application engineers devoted to creating solutions tailor-made for them. Large diameter holemaking, drilling cross-holes, interrupted cuts? We've got them covered. Whether it is deep hole drilling or threading difficult-to-machine materials like Inconel, we get our customers the right tool for their unique holemaking application every time and our team will provide support throughout their entire holemaking journey. We also enjoy getting to know our customers and sharing what we've learned at our technical education seminars. Throughout the year, we encourage end-users to join us for this free program. Training is conducted in our state of the art facility by Allied's skilled engineers, giving them the opportunity to experiment with different speeds and feeds, observe the results and find the best solutions.

### WHAT IS YOUR COMPANY MOTTO?

Holemaking solutions for today's manufacturing.

### WHAT ELSE WOULD YOU LIKE OUR READERS TO KNOW?


Every other year, Allied does something a little out of the ordinary at IMTS in Chicago. We brainstorm a unique theme that will appeal to the market as well as provide a bit of surprise and delight. The range of our product offerings has grown significantly over the last two years through acquisitions and new product launches. To accommodate this growth, we've doubled the size of our booth and will be designing a completely new experience. We invite all IMTS attendees to plan a visit to booth #431436 to see Allied's amazing new products and experience this year's new booth theme.



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6	~15	~15
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12	~30	~30
15	~120	~40

**LEGEND:**  
 \* MILLING  
 \* BORING

**MATERIAL:** 4140 STEEL  
**STARTING HOLE:** 3"  
**FINAL HOLE:** 4"

**DETAILS:**  
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 BORING: 4" 319 SW, Step Cutting, Feed/Tooth: .014"



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ABRASIVES			
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Portable Bonded		Depressed Center Wheels, Cutoff/Chop Wheels	3M, DeWALT, Norton, United Abrasives-SAIT
Vitrified/Super Abrasives		Bench/Pedestal Grinding Wheels, Toolroom Grinding Wheels, Centerless Grinding Wheels, Diamond and CBN Grinding Wheels, Truing and Dressing Tools	3M, Norton
Powerbrushes		Wire Wheel Brushes, Cup Brushes, End Brushes, Power and Hand Tube Brushes	Weiler
Abrasive Blasting		Blast Cabinets, Portable Abrasive Blasters, Abrasive Blast Media	ALC, Aloxxglass, Ballotini, Econoline, Grainger Approved, Westward
WELDING			
MIG Welding		Machines and Wire Feeders, Guns and Consumables, MIG Wire	American Torch Tip, Bernard, Hobart, Lincoln, Miller, Tweco, Westward
Stick Welding		Machines, Electrode Holders, Stick Electrodes, Electrode Ovens	Hobart, Lincoln, Miller, Phoenix International, Tweco, Westward
TIG Welding		Machines, TIG Torches and Consumables, Tungsten Electrodes, Tungsten Grinders, TIG Rod	Diamond Ground, Lincoln, Miller, Miller-Weldcraft, Orbitalum, Tweco
Engine Driven & Multiprocess		Machines and Accessories	Hobart, Lincoln, Miller, Westward
Filler Metals		Stick Electrodes, TIG Rods, MIG/Flux Core Wire, SMAW Wire and Flux	Hobart Brothers, Lincoln, McKay, Westward

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PPE & Welding Protection		Welding Helmets, Gloves, Jackets, Chaps, Welding Blankets, Curtains and Screens, Fume Extraction	3M, Caiman, Condor, Hi Temp, Ironcat, Jackson, Lincoln Electric, Miller, Optrel, Save Phace, Sellstrom, Steiner, Tillman, Ventboss by Robovent, Westward
Chemicals & Support Equipment		Non Destructive Testing (NDT), Anti Spatter, Welding Tables, Pipe Stands and Vises, Welding Cable, Grounding Clamps	Buildpro, Jackson, Mag-Mate, Magnaflux, Miller, Sumner, Weldaid, Westward
MACHINING			
Machinery		Band Saws, Drill Presses, Bench Grinders, Metal Forming Machines, Belt/ Disc Sanders, Lathes, Table Saws, Dust Collectors, Hydraulic Presses and Vertical Milling Machines, Machine Vises	Baileigh, Dake, Dayton, Edwards, Jet, Marvel, Palmgren, Powermatic, SawStop
Round Tools – HSS, Cobalt, Carbide		Burs, Drills, Taps, End Mills, Reamers	Chicago-Latrobe, Emuge, Guhring, Micro 100, Monster, OSG, Sandvik Coromant, Walter, Widia
Inserts & Toolholders		Turning, Milling, Drilling, Threading, Parting/Grooving, Boring	Carmex, Dorian, Sandvik Coromant, Sumitomo, Walter
Toolholding		Collet Chucks, Collets, End Mill Holders, Shrink Fit Holders	Lyndex-Nikken, Parlec, Techniks
Workholding		Clamps and Clamping Kits, Toggle Clamps, Scroll Chucks, Knobs	De-Sta-Co, Kipp, Mitee-Bite, Suburban Tool, Te-Co
Precision Measuring		Calipers, Micrometers, Indicators, Height Gages, Pin Gages, Plug Gages	Brown & Sharpe, INSIZE, LS Starrett, Mahr, Mitutoyo, Vermont Gage
Coolants & Cutting Fluids		Coolants, Cutting Oils, Specialty Fluids	Master, Rustlick, Tap-Magic, Trim, Valcool

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NATIONAL TOOLING & MACHINING ASSOCIATION  
1357 Rockside Rd.  
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# THE RECORD

**Mark  
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Now!**

**Save the date for  
the 75th Anniversary  
NTMA Fall Conference**

Join us as we celebrate our diamond anniversary and recognize the people and companies who have shaped our organization and our industry. Built on tradition and pointed towards excellence-- this is an event you won't want to miss.

**We'll see you in Denver, Colorado October 23-26, 2018.**



The NTMA logo, featuring the letters 'NTMA' in a bold, white, sans-serif font, set against a blue rectangular background.