

**ECONOMY IN U.S. EXPANDED MODESTLY  
SINCE MID-AUGUST, FED SAYS**

The U.S. economy grew modestly with little inflation pressure from mid-August to early October as a strong dollar weighed on manufacturing or tourism. — p15

**ACCOMMODATING MILLENNIALS —  
WHAT DOES IT REALLY MEAN?**

The year 2015 will go down in history as the year Millennials became the largest group in the U.S. labor force. Here are some tips for creating a truly Millennial-friendly workplace that also meets the needs of managers and older colleagues. — p19

**NFPA 30: A GUIDE TO FLAMMABLE  
LIQUIDS**

The National Fire Protection Association (NFPA) has long been the world's most recognized nonprofit organization dedicated to the protection of human life and property from the hazards of fire. Read their updated safeguards and notable changes made for 2015. — p21

**NRL SELECTED AS LOSASSO DONATION  
RECIPIENT**

There's no better way to celebrate a silver anniversary than paying it forward by giving back to the community — and that's exactly what Chicago's LoSasso Integrated Marketing is doing. — p22

**2015 EMO EXECUTIVE  
TECHNOLOGY TOUR REVIEW**

HIGHLIGHTS AND PHOTOS FROM  
MILAN, ITALY. - PP 7-10

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# TABLE OF CONTENTS

## PRESIDENT'S UPDATE . . . . . 4

## COVER STORY

2015 EMO EXECUTIVE TECHNOLOGY TOUR REVIEW . . . . . 7-10

## ADVOCACY

MORE ROBOTS EQUALS MORE JOBS . . . . . 23

## 2016 CALENDAR OF EVENTS . . . . . 31

## COMPANY NEWS

ASTRO MACHINE WORKS EXPANDS ITS OPERATIONS . . . . . 13  
CRAIG TECHNOLOGIES PLAYS A LEADING ROLE IN THE MARTIAN TECHNOLOGY . . 23

## ECONOMY

ACCOMMODATING MILLENNIALS — WHAT DOES IT REALLY MEAN? . . . . . 19  
BEST WAY TO HONOR VETERANS? HIRE THEM! . . . . . 20  
ARE YOU TAKING FULL ADVANTAGE OF YOUR NTMA BENEFITS? . . . . . 25  
GET READY FOR WOMEN IN MANUFACTURING . . . . . 27  
ELECTRICITY SUPPLY SLAMMING . . . . . 29

## EDUCATION

NIMS HAS MOVED . . . . . 3  
NFPA 30: A GUIDE TO FLAMMABLE LIQUIDS . . . . . 21  
NRL SELECTED AS LOSASSO DONATION RECIPIENT . . . . . 22  
NIMS AWARDED NEW FUNDING TO ADVANCE THE NATION'S PRECISION  
MANUFACTURING WORKFORCE . . . . . 25  
WOMEN IN MANUFACTURING RECEIVES \$100,000 GRANT FROM  
THE GE FOUNDATION . . . . . 26

## IN MEMORIAM

RONALD NELSON GILMORE . . . . . 5

## NATIONAL EVENTS

OCTOBER FINANCIAL MANAGERS ROUNDTABLE IN SANTA FE SPRINGS . . . . . 17  
WIM SUMMIT BRINGS TOGETHER TOP WOMEN IN MANUFACTURING  
FOR EDUCATION AND FUN. . . . . 26  
NTMA HUMAN RESOURCES ROUNDTABLE - NOVEMBER 2015 . . . . . 29

## NTMA CHAPTER NEWS

NTMA WELCOMES NEW MEMBERS . . . . . 3  
NTMA WELCOMES NEW NATIONAL ASSOCIATE MEMBER MEMEX . . . . . 3  
NTMA STAFF ANNOUNCEMENTS . . . . . 11  
SAN FRANCISCO CHAPTER AT PACIFIC COAST MACHINE TOOL EXPO . . . . . 13  
NEW 2016 NATIONAL INTERACTIVE MEMBERSHIP DIRECTORY . . . . . 16

## TECHNOLOGY

SNK AMERICA OPEN HOUSE SHARES NEW TOOL TECHNOLOGY  
AND EXPERT INSIGHT . . . . . 28  
MAZAK SMARTBOX LAUNCHES MANUFACTURERS INTO THE IIOT AT  
DISCOVER 2015 . . . . . 30



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Fremont, CA 94538-3158

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Indiana Chapter  
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PO BOX 422  
Columbus, IN 47202-0422

### MASTERS PRECISION MACHINING, INC.

Akron Chapter  
Kenneth Rice  
4465 Crystal Parkway  
Kent, OH 44240

### MICHIANA GLOBAL MOLD

Michiana Chapter  
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Mishawaka, IN 46544

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Many thanks for your continued support of NIMS standards and programs.

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## PRESIDENT'S UPDATE

DAVE TILSTONE / NTMA PRESIDENT

October was one of the busiest months of the year that started with the EMO Executive Technology Tour in Milan, Italy, followed by a Plant Managers Roundtable coupled with a fantastic Fall Conference in St Louis. There is no doubt that members who attended some or all of these events are realizing the value provided by NTMA.

The EMO Executive Technology Tour in Milan introduced everyone to some of the most advanced machining, shop floor intelligence, robotics and cutting tool

technologies. Those that arrived early were offered to join the Ferrari Factory Tour. Most of our members joined the tour and none were disappointed as they were guided through the factory grounds and Ferrari Museum, participated in an F1 pit stop and enjoyed an exciting "ride" in an F1 simulator. Lunch at the Ferrari Restaurant and a visit to the Fiorano test track were also highlights enjoyed by all. Arrangements were even made for some of us to visit the purchasing department of Ferrari's Formula

One division. As a result of this meeting, Ferrari's Manufacturing Director requested our help during his visit to the U.S. in late October.

At EMO Milan, we were hosted by the Italian Machine Tool Association (UCIMU), who provided us VIP passes to the show as well as access to a business lounge and lunch everyday. Herb Homeyer and I met with them and learned that approximately 150,000 attendees from 100 countries were registered for the show with 1,600 exhibitors from 42 countries. EMO Milan consisted of 1.2 million square feet with 12 buildings that housed over 6,600 machines. When we toured EMO we often heard from the executives who hosted us at their booths say that the new technologies introduced at EMO are not yet available in the US. Great way to see what's on the horizon! As a result, several contacts were



EMO Tech Tour visiting the Ferrari Museum

A Ferrari near the factory entrance



made by the NTMA members in advance of IMTS. This article is too short to cover all that was seen and experienced at EMO, however in summary the focus was on intelligent machine controls and software seen at Grob, DMG Mori, GF+, Mazak, Okuma, and Hurco that provide improved interfaces to the operator and real time data to increase productivity and machine uptime to shop management. Visits to Schunk, Mapal, Allied Machine and Engineering, Walter and Big Kaiser highlighted and introduced new cutting tools, advanced tool holder designs and cutting tool

CONTINUED ON — P6

## OPERATIONS & EDITORIAL

Dave Tilstone, President

Nikki Hunt, Content Writer and Publicist

## NTMA EXECUTIVE TEAM

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## NATIONAL TOOLING & MACHINING ASSOCIATION

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## IN MEMORIAM - RONALD NELSON GILMORE

Ronald Nelson Gilmore, 54, of Mesa, AZ, passed away unexpectedly in the early morning of September 14, 2015. Ron was born and raised in Phoenix, AZ, graduating from Shadow Mountain High School in 1978. Ron was gifted with the special talents of mechanics and problem solving. These talents were identified at a very young age. In 1987 Ron purchased and became CEO of Continental Precision, Inc. His business supports production of machined parts for aerospace, defense,

medical and hydraulic valve industries. CPI's customer base includes NASA, NSWC, Boeing, General Dynamic, Goodrich, Talley Defense Systems and many others. CPI was his baby and his home-away-from-home. Ron's wealth of selflessness, robust personality and contagious humor will be sorely missed by his family and friends.



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# VERICUT







Fanuc booth with a robot holding a Fiat. According to Fanuc, this robot has the highest payload in the world

materials. Additive Manufacturing continued to be a focus. We saw machine hybrids that combine 3D printing with machining at GF+, Mazak and DMG Mori and for the first time a line of high performance 3D printed drills were introduced by Mapal for high performance drilling applications with optimal coolant delivery and flute design. An enhanced on-line cutting tool selection and machining parameters software (Novo) by Kennametal was demonstrated based upon material, machine capability etc. Blazer highlighted their large array of coolants with an economic model illustrating the impact their coolants have on part cost and coolant maintenance. One of the most impressive booths was Fanuc. They had a robot picking up a Fiat, noting that the payload capacity was the highest in the industry and was recently introduced into GM's assembly line. Advances in metrology were featured by Zeiss, where optics is the key word, combined with more intelligent interfaces with CAD systems. We visited 19 booths in three days with many of the displays focused on aerospace, automotive and die and mold. Some members had specific interests so I was pleased to introduce them to my network for one-on-one discussions throughout the tour. I want to personally thank the National Associates referenced in my article for making our EMO Executive Tour a resounding success. I'd be remiss if I didn't thank Franco Angiolino who is a huge supporter of the NTMA and a close

personal friend who is based in Milan. His help with logistics, the Ferrari Tour and all the support he provided to our events team was invaluable. The next EMO will be in Hannover, Germany in September 2017. The feedback I received from many of our members was "sign me up!"

#### PLANT MANAGER ROUNDTABLE

Plant Manager Roundtable was held in conjunction with the Fall Conference. Attendees are those that manage your shop or shop owners who want to share and learn about best practices and new ideas as well as discuss and solve problems they have with their operations, employees etc. Another interesting outcome is the networking among attendees after they return back home. Feedback from attendees always includes the importance of contacts they've made and the support provided when new challenges arise. As usual with NTMA events, networking ranks #1. The roundtable was sponsored by Paulo, a leader in innovative heat treating technology, brazing and metal finishing based in the St Louis area. They presented how to manage relationships with heat treaters and their services. Okuma presented shop floor metrics, GF Machining Solutions presented laser technologies, Clifton Larson Allen addressed key employment training, development and retentions practices, while Kennametal demonstrated their revolutionary NOVO tooling selection and machining parameter software. Of course the roundtable that followed the

presentations was also a highlight with attendees discussing real world problems and opportunities they have in their shops.

#### FALL CONFERENCE

With Fall Conference now behind us, I can tell you first-hand that it was a fabulous event! Herb Homeyer's hometown of St. Louis welcomed us with open arms. With the sponsorship and support of our National Associate Members, the extraordinary and inspiring speakers and exhibits, and the assistance and coordination by the events team, NTMA staff, and feet on the ground while we were there, the 2015 Fall Conference proved to be one of the best yet!

One of the many event highlights of the week was the Oktoberfest hosted by Homeyer Precision Manufacturing. What an over-the-top amazing evening! The Homeyer family did all the cooking and gave tours of Herb's shop, making for an impressive and delicious night by anyone's standards. We also enjoyed a night at Ballpark Village hosted by Kennametal, right across the street from the St. Louis Cardinals home field, Busch Stadium. During the conference, we debuted an Emerging Leaders video funded by CliftonLarsonAllen which prompts us all to consider how we are helping our Emerging Leaders lead our companies into the next generation. The short and long forms of the video, which feature our Emerging Leaders as the future of our industry and the NTMA, premiered at the General Assembly and then at the Gala.

This Fall Conference review is a small taste of what our December issue of The Record has to offer. For those of you who were there, I encourage you to contact me ([dtilson@ntma.org](mailto:dtilson@ntma.org)) or our new Record Editor, Nikki Hunt ([nhunt@ntma.org](mailto:nhunt@ntma.org)), with your own observations about Fall Conference 2015. We look forward to seeing your pictures and reading your own event highlights, observations, connections, and takeaways!

DAVE TILSTONE /  
NTMA PRESIDENT

*Dave Tilstone*







# 2015 EMO Executive Technology Tour Review

The 2015 EMO Executive Technology Tour took place this October in Milan, Italy. Hosted by UCIMU, the five day event introduced its nearly 150,000 attendees to some of the most advanced technologies in machining, shop floor intelligence, robotics and cutting tools.

The event highlighted 1,600 exhibitors with over 6,600 machines and technology devices, some yet available in the United States. Many displays focused on aerospace, automotive and die and mold. DMG Mori, GF+, Grob, Hurco, Mazak, and Okuma were among the intelligent machine control and software exhibitions, while Mapal, Schunk, Allied Machine and Engineering, Walter and Big Kaiser showcased new cutting tools and materials as well as advanced tool holder designs.

## **EVENT HIGHLIGHTS FOR NTMA MEMBERS INCLUDED:**

- GF+, Mazak, DMG Mori and Mapal displays of Additive Manufacturing and hybrid machine
- Kennametal's demonstration of Novo, their enhanced on-line cutting tool selection and machining parameters software
- Zeiss advances in metrology, utilizing intelligent interfaces with CAD systems
- Blaser's economic model illustrating their coolants impact on part cost and coolant maintenance
- Fanuc's robot technology demonstration displaying the highest payload capacity in the industry, recently introduced into General Motors assembly line

The next EMO will be hosted in Hannover, Germany in September 2017.



EMO Tech Tour visiting the Ferrari Museum

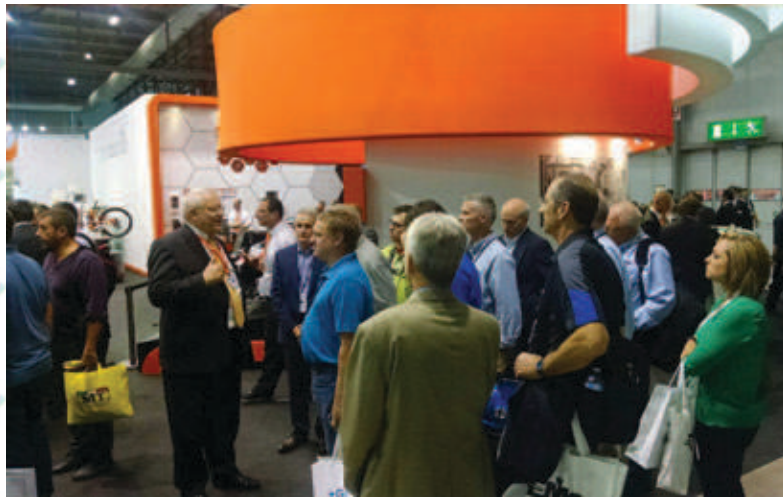


Above: NTMA EMO attendees are ready for the DMG MORI tour

Below: Blaser Swisslube Tour learning about the 'Liquid Tool'







Left: Brian Papke, President of Mazak gives the NTMA attendees a personal tour

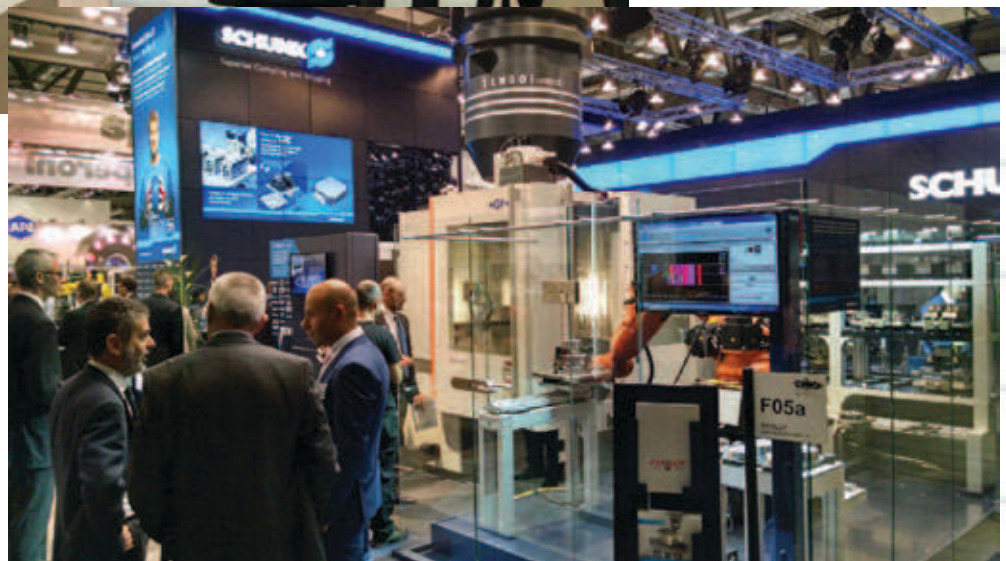
Below: FANUC impresses attendees with new robotic automation technology



Below: GROB showing attendees their 5-Axis universal machining center with excellent accessibility to the working area, a distinct advantage for job shops with small production batches that need to change frequently



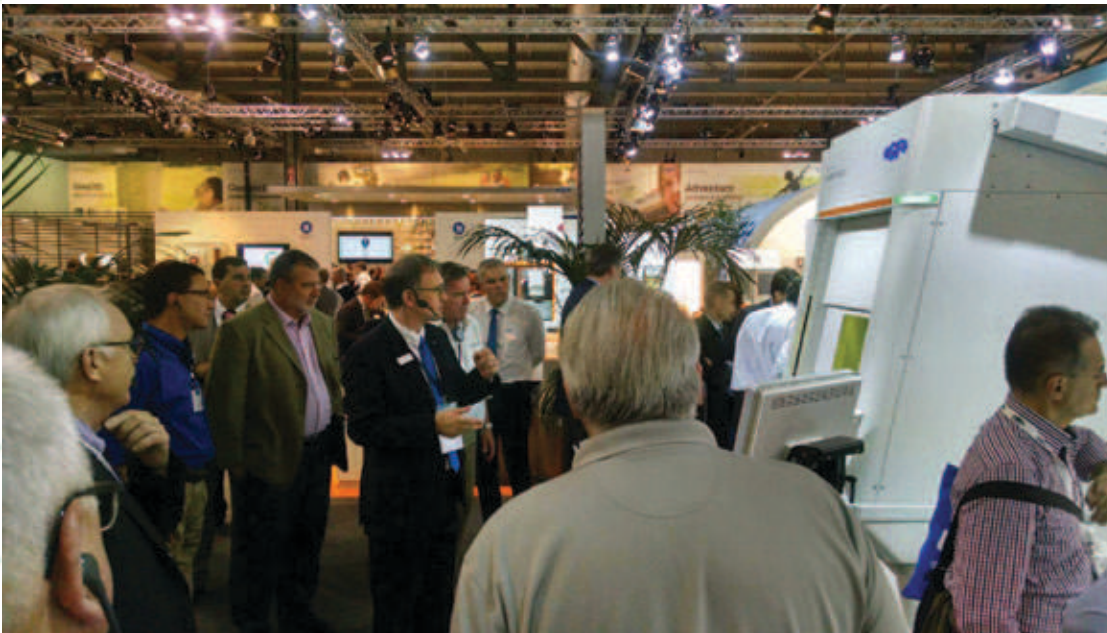
Right: New National Associate, SCHUNK showcases their full portfolio of products and wow's crowd







Above: NTMA EMO attendees enjoy the welcome dinner in Milano, Italy



Left: Gisbert Ledvon of +GF+ gives a notable presentation on their new EDM, Laser and milling technologies #swisspercision

Right: NTMA EMO attendees get an opportunity to work the pit stop during the Ferrari tour.







Chris Kaiser and Jack Burley of Big Kaiser share their high-precision tooling systems and solutions with the NTMA attendees

NTMA EMO attendees gather round to learn more about Kennametal's NOV0



Okuma shares their two new 5-axis machining centers featuring a large work area, high traversing speeds and high cutting performance





## WHITNEY GAGLE

It is with great pleasure that NTMA announces Whitney Gagle has accepted the position of Membership & Chapter Services Executive for the Western Region effective October 1st. In this newly created position, she will be responsible for Chapter support and development, membership recruitment and retention as well as membership support and services for the Arizona, New Mexico, Los Angeles, San Diego, San Fernando Valley, San Francisco, Rocky Mountain, N. Utah Chapters and members at large within her region. As I had previously communicated, our plan for 2015 is to decentralize Chapter and member support so support services are localized to our members and Chapters. Nationally this aligns with our strategic plan by committing key resources to strengthen our Chapters and the value we provide to our members. Whitney resides in Scottsdale, Arizona. In her new role she will report directly to Dave Tilstone.

Please join us with wishing Whitney the very best of success in her new role.

Nikki joins NTMA as the Marketing and Content Writer/Publicist. In this role, she will lead and write news stories and articles for the Record and E-Trends. Nikki brings four years of journalism and marketing experience and an education from John Carroll University. She is excited to learn more about our Chapters and get an inside look at the industry. To share your news and stories with NTMA members, contact Nikki at [nhunt@ntma.org](mailto:nhunt@ntma.org).



## NIKKI HUNT



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# ASTRO MACHINE WORKS EXPANDS ITS OPERATIONS



Astro Machine Works (Ephrata, PA) has added a third building to accommodate its expanding operations. Since starting business in 1984, the company has continually grown its capabilities for CNC machining and custom machine building.

Following complete renovations to both the interior and exterior, Astro Machine Works gained occupancy in early September. Restoration included electrical, painting, shop lighting, epoxy flooring, new exterior cladding, and complete paving, marking and fencing of the property. The additional 21,000 square foot facility now houses their Engineering, Assembly and Wire EDM departments.

Astro Machine Works notes that they constantly add machinery and personnel to keep up with the increased demands

of their customers. They are growing as a result of the many great relationships with a growing customer base, including customers in the food, pharmaceutical, military, medical device, aerospace, government, defense and nuclear industries.

The company says their growth can be attributed to not only taking care of their customer relationships, but also a workforce which is second to none. Their made-in-America initiative means they are manufacturing custom designed machines and automation systems as well as parts at the highest quality standards.

For more information on Astro Machine Works see their website ([www.astromachine-works.com](http://www.astromachine-works.com)), email [bhess@astromachineworks.com](mailto:bhess@astromachineworks.com) or call (717) 738-4281.



"THIS PROPERTY WAS ORIGINALLY PURCHASED IN 1999 WITH SPECULATION FOR THE CONTINUED FUTURE GROWTH OF OUR COMPANY IN MIND. THIS FORESIGHT HAS NOW BECOME REALITY AS OUR NEW TECHNICAL CENTER HAS COME ONLINE AND NEW EFFICIENCIES ARE BEING REALIZED. THIS ADDITIONAL FACILITY WILL ALLOW US TO TAKE OUR MACHINE DESIGN AND ASSEMBLY DEPARTMENTS TO THE NEXT LEVEL AS WE CONTINUE TO BUILD OUR NEW AND EXISTING CUSTOMER BASE AND NAVIGATE EVER INCREASING PROJECT DEMANDS, BOTH IN SIZE AND COMPLEXITY. IN ADDITION, AS A RESULT OF THIS MOVE, ADDITIONAL SQUARE FOOTAGE HAS BEEN ALLOCATED FOR TWO STATE-OF-THE-ART PIECES OF EQUIPMENT THAT ARE BOTH SCHEDULED TO BE COMPLETELY OPERATIONAL BY THE END OF THIS CALENDAR YEAR. THIS COMBINATION OF REINVESTMENT AND CONTINUOUS IMPROVEMENTS WILL HAVE US OPERATING AT A WHOLE DIFFERENT LEVEL AS WE PREPARE FOR 2016 AND BEYOND..."

Eric L. Blow, Astro Machine Works, Inc.



## SAN FRANCISCO CHAPTER AT PACIFIC COAST MACHINE TOOL EXPO

The San Francisco Chapter joined forces with NTMA-U at the Pacific Coast Machine Tool Expo, September 23-24. The Expo was held at the Santa Clara Convention Center.

The booth featured information on the growing San Francisco Chapter and three area colleges. The California Tooling and Machining Apprenticeship Association was across the aisle from San Fran's NTMA booth – SF Chapter Executive Nils Kjell reports that between the two booths they spoke with over 150 people over 2 days. Nils wanted to thank Michelle Myhre and Dave Buttner for spending several hours working the booth.

Pacific Coast Machine Tool Expo is a regional event for the machine tool and manufacturing industry. This two-day Expo offered free educational advice and an exhibit floor featuring the latest products and services in the industry. Attendees enjoyed the opportunity to see what's current in the industry, find products that will improve cost efficiency and network with peers.

Overall a great effort by the Chapter – supporting current and future machining in the SF Bay Area!



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## NTMA AFFINITY PROGRAM SPOTLIGHT

### AFFINITY PROGRAMS - A SIMPLE DEFINITION

NTMA is able to save members significant amounts of money on products and services they are already using. These cost-savings programs are what we call "Affinity" programs and they are among the most tangible benefits of NTMA membership. Over the course of 2015 we are going to highlight the companies and their products and services so members better understand the benefits our Affinity Partners offer.

NTMA is proud to be able to help our members save millions of dollars each year on products and services essential to the operation of their business. Who isn't looking to save money, right? Look right here each month.

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## ECONOMY IN U.S. EXPANDED MODESTLY SINCE MID-AUGUST, FED SAYS

The U.S. economy grew modestly with little inflation pressure from mid-August to early October as a strong dollar weighed on manufacturing and tourism, a Federal Reserve report shows.

Six of the 12 Fed districts report the expansion as "modest," while three report "moderate" growth, according to the Beige Book released Wednesday in Washington. Two districts, Boston and Richmond, saw an increase in economic activity, while Kansas City declined. The pace of growth in Richmond and Chicago slowed compared with the previous report, the central bank says.

Labor markets "tightened in most districts" even as wage growth remained subdued, with increases concentrated among highly skilled workers, the report says. Price pressures were "contained" as some districts saw cheaper energy and commodities, according to the survey, which is based on information Fed district banks gathered on or before Oct. 5.

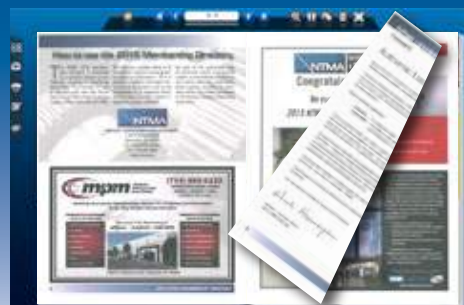
"Business contacts across the nation were generally optimistic about the near-term outlook," the report states. Consumer spending "grew moderately," housing and commercial real estate improved, and banking and finance "were generally positive."

Less favorable reports came from industries including manufacturing, which "turned in a mixed but generally weaker performance." Goods transportation also softened and the energy sector declined further.

Fed policy makers at their Sept. 16-17 meeting voted to leave their main policy interest rate unchanged, which has been held near zero since December 2008. They now wait for more information to gauge how a slowdown in China influences their confidence in the outlook for U.S. inflation and growth.



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# OCTOBER FINANCIAL MANAGERS ROUNDTABLE IN SANTA FE SPRINGS



## FINANCIAL MANAGERS ROUNDTABLE

“The Financial Managers Roundtable is a well kept NTMA secret.” That’s just some of the buzz floating around after the October roundtable held in Santa Fe Springs. Hosted at the NTMA Training Center, the event welcomed attendees from California, Utah, and Colorado to a day filled with industry discussions led by the sponsor, CBIZ.

Attendees shared positive feedback about the value of the event’s up-to-date information and deep discussions and perspectives. Presentations included ‘Pros/Cons of Corporate Structures in Current Tax Environments’ led by CBIZ Managing Director Dana Boutain and Director Andrew Kiefer, as well as ‘Benefits & Usage of 13 Week Cash Flow’ led by CBIZ Consulting and Internal Control Services Managing Director, Gregg Landers. The day wrapped up with an open roundtable discussion among sponsor and attendees.

“The roundtable was a great opportunity to learn about the latest regulatory changes affecting my work, learn best practices, and meet some great people in our industry,” says attendee LJ Suzuki, Finance Manager with Mountainside Medical. “I’m looking forward to attending these in the future.”

The next Financial Managers Roundtable will be held Wednesday, November 11, in Kansas City, Missouri.



Below: Nick Mosey (Moseys’ Production Machinists), Andrew Keifer (CBIZ), Raj Rajan (CBIZ)



Left (L-R): Neal Rubin, Raj Rajan, Nick Pyzow, Dana Boutain, Gregg Landers, Andrew Kiefer

Left (L-R): Neal Rubin, Raj Rajan, Nick Pyzow, Dana Boutain, Gregg Landers, Andrew Kiefer

Below (L-R): CBIZ networking with members, Keith Jacks (TCI), Nick Pyzow (CBIZ), Landon Hadley (JD Machine)



Left: Networking (L-R) LJ Suzuki (Mountainside Medical), Gregg Landers (CBIZ), Dana Boutain (CBIZ)

Members participating in the last session of the day of the roundtable



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# ACCOMMODATING MILLENNIALS – WHAT DOES IT REALLY MEAN?

The year 2015 will go down in history as the year Millennials became the largest group in the U.S. labor force. Currently comprising about one third of the labor force, by 2020, these young adults (now between 18 and 34 years old) are expected to make up 50 percent, says a study by PricewaterhouseCoopers (PwC).

Perhaps that's why these young adults have become the subject of countless news articles, business summits and research studies all endeavoring to explain their behavior in the workplace. While some say Millennials are lazy, entitled and require an inordinate amount of praise and hand-holding from their employers, others point to Millennials' altruism, confidence and the fact that they are the best-educated generation in history. Most significantly, Millennials are the first generation to have grown up with the Internet, and they have a comfort level with technology that isn't innate to other generations.

Given these realities, accommodating Millennials at work isn't merely a choice, it's a necessity. In Aerotek's most recent survey conducted at the 2015 Society for Human Resource Management (SHRM) Conference, they asked attendees how important it is to accommodate Millennials in their own workplaces. Seventy-nine percent believed it was extremely or very important.

Yet, transforming workplace dynamics is

not without its challenges. Here are some tips for creating a truly millennial-friendly workplace that also meets the needs of managers and older colleagues:

## 1. DO GOOD WORK

Millennials care about causes. Many studies, including the 2014 Millennial Impact Report, have shown that Millennials want to make a difference, not only at their jobs, but also in the world. "Today's twenty- and thirty-year-olds have made it clear to companies that they expect to be able to integrate cause work into their professional lives," writes Emily Yu of the Case Foundation. "Driven by Millennials, this shift will radically transform how companies define themselves in relation to the social sector. It will be up to companies themselves to answer this call and change their own internal structures and approaches to accommodate Millennials' hunger for work that is both fulfilling and meaningful."

## 2. ENCOURAGE ENTREPRENEURIAL PURSUITS

This is the generation that grew up watching Facebook Founder Mark Zuckerberg, and more recently Snapchat Founder Evan Spiegel make billions from their social media platforms. According to a study by the University of North Carolina, "92 percent of surveyed 21-24 year-olds said entrepreneurship education was vital in the new economy ..." and "30 percent started a business in college." Take advantage of Millennials' entrepreneurial spirit by giving them opportunities to develop new ideas for the company. For example, employees at Google are permitted to use 20 percent of their work-time on projects that aren't directly related to their job titles.

"If you can help your employees find their passion, they'll be unimaginably successful. The key is to recognize when young employees are getting listless in their jobs. Take the opportunity to coach them into defining their ideal job descriptions, and give them the opportunity to show how they can contribute," says Joseph Fung, CEO of TribeHR.

## 3. BE FLEXIBLE

As digital natives, many Millennials are reinventing how work is done in and outside of the office. "Millennials do not believe that productivity should be measured by the

number of hours worked at the office, but by the output of the work performed. They view work as a 'thing' and not a 'place,'" says the PwC study. Millennials expect to be able to work from anywhere, call into meetings and work when they feel motivated.

Brent Pridgen, director of business operations at Aerotek, says that when it comes to managing and retaining Millennials, it's important to evaluate what kind of flexibility you have to work with. "Management has to communicate that some things are going to stay the same as the core function of the business. That's where you need to focus on your development and having clear communication about expectations," says Pridgen.

## 4. SUPPORT WORK-LIFE BALANCE

The PwC study also found that Millennials place a premium on good work-life balance. This generation values personal time and may not be willing to sacrifice their well being in exchange for the corner office. But managers take note: According to Mental Health America, "When workers are balanced and happy, they are more productive, take fewer sick days and are more likely to stay in their jobs."

## 5. MAKE THE WORKPLACE SOCIAL

While Millennials may not choose to be in the office at all times, when they are onsite, they want to enjoy their co-workers and have open communication with superiors. Research shows that Millennials value relationships with colleagues and their managers more than other groups. These young professionals tend to be team players and do well when it comes to collaborating with others.

"Younger workers have a strong need to feel connected at their workplace. Companies that wish to retain these workers must create a workplace that encourages, rather than discourages, social interaction," says Roberta Matuson of Glassdoor.

## 6. HELP MILLENNIALS FIND MEANING IN THEIR WORK

Millennials want to know their contributions are having an impact on their organizations, and not just in helping them to make money. And while Millennials may go about their business differently, when you consider the facts, it becomes clear that

SEE "MILLENNIALS" NEXT PAGE



# BEST WAY TO HONOR VETERANS? HIRE THEM!

BY STEVE NOWLAN



Veterans Day gives us another opportunity to consider whether, as employers, we are doing the best we can to honor veterans by recruiting them into the civilian workforce. There are one million veterans looking for full-time jobs, most of whom have exhausted their unemployment and are living on the charity of family, friends and community nonprofits.

While this may sound simplistic, if every business in the U.S. with full-time job openings took on the commitment of hiring at least one veteran, without “waiting for Washington” we in the private sector could remedy the dramatic economic problems facing our veterans and their families.

Making a commitment to hire at least one veteran into a good job should not be mistaken for charity. Veterans are among the most highly trained, productive and team-oriented people available to help build our companies. We have the most advanced military in the world. Considering all the skills and

competencies required to sustain this very sophisticated military, our veterans comprise an extraordinary talent pool.

The key step is for more company CEOs and senior leaders – especially those who are

make this extra effort to hire veterans? If the recruiting process is well managed, it makes terrific business sense. Not every veteran is going to be a great fit for the company. The goal is to find the veterans who are inherently

a great fit because of their attitude, values, training, skills and excitement about building a career in the company. This is going to require recruiters to understand how to evaluate military experience in performance – and this goes beyond just plugging some Military Occupational Specialty (“MOS”) numbers into a database to see what training the veteran has had. Help in interpreting military experience is readily available.

The bottom line is the veteran talent pool offers rich

opportunities if a CEO commits to taking the right steps to navigate the networks that lead to successful hires. With a million veterans who managed global deployments, maintained hundreds of billions of dollars’ worth of nearly every conceivable technology, organized world-wide supply chains, successfully completed major projects in hostile environments, and managed the financial and human resources for far-flung operations, there are certainly extraordinary performers who will help build our companies – if we are willing to reach out and find them.

Let’s use this Veterans Day to make a commitment to hire at least one veteran in the next six months, and then follow through to ensure that commitment is met. We need the talents veterans have, and veterans need the jobs our companies offer.

Steve Nowlan is president of Center for America and coordinator for the **American Jobs for America's Heroes** campaign. For free help with your veteran recruiting, contact Steve at 201-513-0379 or [SNowlan@CenterForAmerica.org](mailto:SNowlan@CenterForAmerica.org). To download a free copy of CFA’s Best Practices Guide for Veteran Hiring, visit <http://www.CenterForAmerica.org/bpg.html>



**A female Air Force soldier makes arrangements for an emergency food drop from a C-130. U.S. Air Force photo by Staff Sgt. Vernon Young Jr.**

veterans – to set a goal for hiring veterans and then to make sure that this goal is achieved by those responsible for hiring new employees. This means actively showing a continuing interest in the steps taken by the team to ensure that this is achieved.

Too many employers express a willingness to hire veterans, but then passively wait for them to answer job ads or knock on the front door. Many recruiters make little or no effort to reach out to the local National Guard employment team or the military base to enable them to match postings with candidates. Such a passive approach is rarely successful.

Most veterans have little or no expertise in looking for a civilian job, and probably have no idea what the benefits are in pursuing a career in your industry or company. Help for veterans from government and community agencies to match them with jobs varies from excellent to totally ineffective and frustrating.

Truth is, employers need to be prepared to figure out which job openings should be attractive to veterans, and then network with veterans’ organizations, military support organizations, and the National Guard to equip them with compelling job information and get their help identifying candidates. This takes active outreach. CEOs will want to encourage their recruiters to invest the time to do this and report back on steps taken.

Does it really make business sense to

## “MILLENNIALS” CONTINUED

their concerns aren’t really so different than those of Gen Xers and Boomers.

“When people are involved and they feel that their efforts are truly contributing to something, then they are more willing to reciprocate – and everyone wants that regardless of their generation,” comments Pridgen. In fact, there are “widespread similarities between Millennial employees and their non-Millennial counterparts, all of whom aspire to a new workplace paradigm that places a higher priority on work-life balance and workplace flexibility,” says the PwC study. “The research shatters commonly held myths about Millennials in the workplace, uncovering attitudes and behavior that largely mirror those of their more senior colleagues.” Could it be that what’s good for Millennials is good for everyone?

For more information on Aerotek, “bringing great people and great organizations together®,” or Millennials in the workplace, visit [www.aerotek.com](http://www.aerotek.com).





# NFPA 30: A GUIDE TO FLAMMABLE LIQUIDS



The National Fire Protection Association (NFPA) has long been the world's most recognized nonprofit organization dedicated to the protection of human life and property from the hazards of fire. NFPA membership currently exceeds over 70,000 fire protection professionals from close to 100 countries. The NFPA publishes over 300 nationally recognized fire codes and standards, as well as fire service training and public education materials.

## UNDERSTANDING NFPA 30

On April 29, 2014, the NFPA Standards Council issued the 2015 edition of NFPA 30: Flammable and Combustible Liquids Code with an effective date of May 19, 2014. NFPA 30 provides fundamental safeguards for the storage, handling and use of flammable and combustible liquids, including waste liquids. It is the best practice widely used in industry and by insurers.

The 2015 edition highlights 11 notable changes from the 2012 edition. Most notable of these changes is the definition of a safety can. It has been amended to incorporate a screen/strainer in each fill and pour opening. Other changes to the 2015 edition of NFPA 30 include:

- A new storage height restriction of 12 feet for unprotected storage in mercantile occupancies.
- Numerous amendments to Chapter 16 to eliminate inconsistencies between NFPA 30 and NFPA 13: Installation of Sprinkler System rules.
- Separation distances were increased between process vessels and adjacent important buildings and property lines as recommended by the U.S. Chemical Safety and Hazard Investigation Board.
- A new subsection was added to cover hand-operated pumps to dispense liquids that require the use of compressed air.
- A new section governs the installation of bulk cooking oil storage and dispensing systems for use in commercial kitchens.
- The use of a weak roof-to-shell seam was eliminated as a means of emergency venting for aboveground steel storage tanks.
- A maximum capacity of 50,000 gallons was set for all secondary containment type storage tanks for Class I, Class II and

Class IIIA liquids.

- Provisions for the use of low melting point piping material were strengthened.
- Additional requirements were added for those responsible for loading and unloading tank vehicles.
- Security of storage tanks in remote areas is now addressed in Annex A.

## NFPA 30 HANDBOOK

The NFPA Handbook is a companion to the NFPA 30 code. It contains all the content found in the code and also provides expert commentary that explains applications and reasoning. It also adds over 200 visuals, including full-color photographs that help visualize concepts, more detailed descriptions of the changes made from the 2012 edition and various other enhancements to help better understand the NFPA 30 code.

### Commonly Asked Questions

#### Q. WHAT IS A SAFETY CAN?

A: NFPA 30 paragraph 3.3.48 defines a safety can as a listed container of not more than 5.3 gallons (20 liters) capacity having a screen or strainer in each fill and pour opening and having a spring-closing lid and spout cover designed to safely relieve internal pressure when exposed to fire.

#### Q. ARE WOODEN CABINETS ACCEPTABLE FOR FLAMMABLE STORAGE?

A: NFPA 30, chapter 4.3.3 (c) states, "Wooden cabinets constructed in the following manner are acceptable. The bottom, sides and top shall be constructed of exterior grade plywood at least 1 inch (2.5 centimeters) in thickness, which shall not break down or delaminate under fire conditions. All joints shall be rabbeted and shall be fastened in two directions with wood screws. When more than one door is used, there shall be a rabbeted overlap of not less than 1 inch (2.5 centimeters). Doors shall be equipped with a means of latching, and hinges shall be constructed and mounted in such a manner as to not lose their holding capacity when subjected to fire exposure. A raised sill or pan capable of containing a 2 inch (5 centimeter) depth of liquid shall be provided at the bottom of the cabinet to

retain spilled liquid within the cabinet."

#### Q. DO FLAMMABLE LIQUID STORAGE CABINETS HAVE TO BE VENTED?

A: NFPA 30, paragraph 9.5.4 states that a storage cabinet is not required to be vented for fire protection purposes. Paragraph 9.5.4.2 states if the storage cabinet is vented for any reason, the vent openings must be ducted directly to a safe location outdoors or to a treatment device designed to control volatile organic compounds (VOCs) and ignitable vapors in such a manner that will not compromise the specified performance of the cabinet and in a manner that is acceptable to the authority having jurisdiction.

## SOURCES

NFPA 30: Flammable and Combustible Liquids Code, 2015 Edition

NFPA 30: Flammable and Combustible Liquids Code Handbook, 2015 Edition (Rev. 7/2015)

For even more information about regulatory issues you face in your workplace and to view all QuickTips Technical Resources, visit [www.grainger.com/quicktips](http://www.grainger.com/quicktips).

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### PLEASE NOTE:

The content in this newsletter is intended for general information purposes only. This publication is not a substitute for review of the applicable government regulations and standards, and should not be construed as legal advice or opinion. Readers with specific compliance questions should refer to the cited regulation or consult with an attorney.



# NRL SELECTED AS LOSASSO DONATION RECIPIENT

There's no better way to celebrate a silver anniversary than paying it forward by giving back to the community - and that's exactly what Chicago's LoSasso Integrated Marketing is doing. The independent agency that offers a full suite of services for modern, online and content-based marketing programs invited its clients to nominate their charity of choice to receive \$25,000 worth of marketing services.

"We thought this was a nice way to tie goodwill to this important company milestone," says LoSasso President, Scott LoSasso. "There are a lot of great organizations that work really hard to enact their mission, but don't have the extra time or energy to develop a solid communications plan. We have a lot of talented people at LoSasso and we want to help."

With a client base predominantly in the manufacturing equipment and tooling, construction, consumer entertainment and agriculture fields, LoSasso selected the National Robotics League to receive this generous gift.

The company reasoned, "Because of our work in manufacturing, the agency is very familiar with the challenge that U.S. manufacturers face in attracting young people to the industry. It's an issue that poses a challenge for thousands of companies and our economy at large. NRL provides fun and exciting ways to expose young people to industries that are rich with opportunity but starving for smart, tech-savvy talent. Partnering with the NRL is one way LoSasso can apply our knowledge and give back to an industry that has been good to us—and the youth it serves."

The initial planning began in April, brainstorming how best to promote the mission of the NRL to rebuild the manufacturing workforce while providing an

enjoyable experience for students and industry leaders. It was determined that rather than focus marketing efforts on the number of teams involved, the foundational purpose should be engaging NTMA member companies and encouraging their serving as an Industry Advisor for a competition team.

Ultimately, the clear and present dangers to the manufacturing industry, and the U.S. economy, are the skills gap and negative perception of working in industry. But, recruiting more student teams won't easily solve the problem. In fact, only manufacturing companies are able to truly train the next generation of workers and change the perceptions of working in industry, making them vital to the process and the NRL.

For both the NTMA and the NRL, success is not based on who wins a robotics competition. Rather, the NRL program is at its best when an NTMA member company partners with a local school to design and build a Bot while developing invaluable relationships with the teachers and students. A high school student is not going to understand the benefits of working for you if you do not open your doors to them.

LoSasso understands this critical mission and is motivated to assist in getting every NTMA member company to understand, explore and consider serving as an NRL Industry Advisor. Imagine having all 1,300 NTMA member companies partner with their local school to build a Bot. With

the average of 10-15 students per team, that is close to 20,000 students gaining a better understanding of what you do. We are not talking about having a class of students take a tour of your facility. We are talking about engaging 20,000 potential future employees in the total manufacturing process.

The first deliverable of this project is a printed and online Industry Advisor Toolkit. As Steve Tamasi, the NRL Team Leader and CEO of Boston Centerless, always points out, we can't just tell you that you must engage with the next generation of manufacturing workers, we

need to provide you with the "How To's".

We know how busy you are, so we want to make it easier for your company to participate in the program.

**WHAT IS THE  
NRL INDUSTRY  
ADVISOR TOOLKIT ALL  
A 'BOT'?**

The toolkit is divided into three sections:

- Joining the National Robotics League as an Industry Advisor: The Why, How and What's-In-It-For-You
- An NRL Industry Advisor's Guide to Success: Way Beyond Battle Strategies
- Facts and Success Stories: Why the NRL and Its Industry Advisors Matter

The first section, *Joining the National Robotics League as an Industry Advisor*, is an introduction to the NRL program. We make the case for why it is critical that manufacturing companies get involved with local schools and why the NRL program is different from other STEM programs. This section also provides

the value proposition for industry involvement in addition to the how and who to engage at the school in order to convince them to participate in the program.

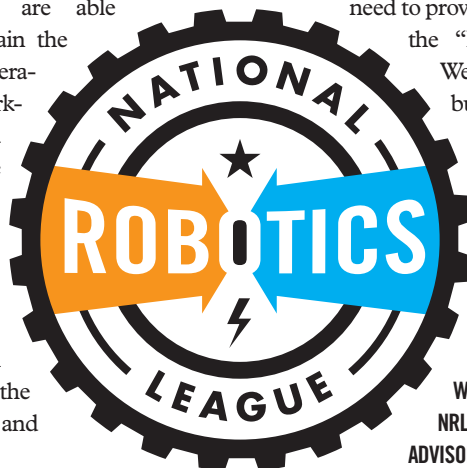
The second section, *An NRL Industry Advisor's Guide to Success*, provides a guidebook for how to be an effective Industry Advisor. We outline what it means to be an Advisor and how to be a partner in a project-based learning environment. This section also includes tips on skill learning and helping students to understand the benefits of a manufacturing career pathway.

The third section, *Facts and Success Stories*, is designed to arm manufacturers with testimonials regarding the benefits of the NRL to share with teachers, administrators, parents and students. The testimonials come from Industry Advisors and students that were involved in the program. Facts and figures about why a manufacturing job-driven, project-based STEM learning experience is critical for the future of both industry and the economy are also included.

The complete Industry Advisor toolkit is available to be viewed and/or downloaded at [www.goNRL.org](http://www.goNRL.org). Please take the time to read through these sections and learn more about the why and how to be an effective NRL Industry Advisor. Everyone is talking about the importance of promoting manufacturing careers to our youth - the NTMA in partnership with LoSasso, has provided you with the blueprint to ACT!

*Do you want to take advantage of this opportunity that will directly benefit the future success of your company, or stay on the sidelines?*

A new research report conducted by SkillsUSA, The Manufacturing Institute and the Educational Research Center of America found that 64% of students stated personal experi-





ences are the greatest influencer over their future career choice. The next highest influencers were Fathers at 22% and Mothers at 19%. Think about it, you have the ability to influence the career choices of the next generation of workers. Go to [www.goNRL.org](http://www.goNRL.org) to learn why becoming an NRL Industry Advisor is a smart move for the future of your company.

On behalf of the NTMA, we would like to acknowledge the high quality of work and support from LoSasso Integrated Marketing. Without their generous donation of time and resources, the NRL Industry Advisor Toolkit would still be a project on paper and not in your hands. LoSasso turned our thoughts and ideas into a clear, concise and accessible format. Think about what they could do for your company. For more information about LoSasso Integrated Marketing, visit their website at [www.losasso.com](http://www.losasso.com).



## CRAIG TECHNOLOGIES PLAYS A LEADING ROLE IN THE MARTIAN TECHNOLOGY



At NASA's Kennedy Space Center, the work of Craig Technologies scientists as part of the Engineering Services Contract (ESC) is not science-fiction, but technology being used by real astronauts.

Growing plants and vegetables in space has received a lot of face time from the recent release of the blockbuster film *The Martian*, and the NASA Veggie team has made this technology possible. This technology will go a long way in researching human survival in space, and one day a manned mission to Mars.

Craig Technologies employee, Lashelle Spencer, is a chemist who works on the NASA Veggie team and is responsible for the phytonutrient analysis of produce grown on the International

Space Station (ISS) and on Earth.

"I am helping to answer the question, 'does the nutrient content of produce grown in micro gravity differ from that grown terrestrially?' I also lend support with ground research activities, which most recently include Veggie plant pil- lows for launch to the ISS."

Spencer was also the ESC Technical Primary Investigator for the Human Research Program, where the goal was to harvest and chemically analyze



Lashelle Spencer, Veggie hardware with Red Romaine Lettuce, "Outredgous", and two dwarf tomato plants

various dwarf tomatoes and peppers to help determine the next crop to be grown by Veggie.



## MORE ROBOTS EQUALS MORE JOBS

BY: ANNE MARIE MOHAN, PACKAGING WORLD

Data contained in a new white paper from The Association for Advancing Automation (A3) dispels myths perpetrated by the media and a perception that increasing the use of robots causes higher rates of unemployment in the U.S. The white paper, "Robots Fuel the Next Wave of U.S. Productivity and Job Growth," uses data from the Bureau of Labor Statistics and a wide range of manufacturing firms to document how and why increasing the use of robots is associated with increased employment.

Key statistics from the A3 white paper show that during the non-recessionary periods—1996-2000, 2002-2007, and 2010-2014—general employment and robot shipments

both increased. Since 2010, the robotics industry in the U.S. has grown substantially. Even during this period of record-breaking robot sales, U.S. employment increased.

"We are seeing concrete shifts in the factors that resulted in cuts to the U.S. manufacturing workforce over the past few decades," says Jeff Burnstein, President of A3. "Manufacturing automation increasingly provides the flexibility in the variety of tasks robots perform to drive improvements in overall product quality and time to market.

"One of the biggest challenges we now face is closing the skills gap to fill jobs. Robots are optimizing production more than ever, increasing global competitiveness and performing

dull, dirty, and dangerous tasks that enable companies to create higher-skilled, better-paying, and safer jobs where people use their brains, not their brawn."

As companies seek to bring manufacturing operations stateside while remaining cost-competitive, the paper notes, they continue to turn to automation to help lead the new wave of productivity and job growth in the U.S.

Says Geoff Escalette, CEO of faucet-maker RSS Manufacturing & Phylrich, "The whole premise for our company is to bring manufacturing back to this country, and our new robot fits perfectly with that master plan. Our robot not only makes it possible to increase production speed without buying additional

CNC machines, but also helped us open up 30 percent more capacity on existing machinery."

A3 adds that robotics also help companies stay competitive when seeking new talent—particularly those who are interested in long-lasting careers working with technology. "It's really an opportunity for us to grow," reports Matt Tyler, president and CEO of Vickers Engineering, a contract precision engineering manufacturer. "Because we have robotics and are able to compete on a global scale, it makes the U.S. more competitive in manufacturing, and that's good for all of us."



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**Arizona CNC Equipment**  
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**EMEC Machine Tools, Inc.**  
[www.emecmt.com](http://www.emecmt.com)

**GOSIGER**  
[www.gosiger.com](http://www.gosiger.com)

**Hartwig, Inc.**  
[www.hartwiginc.com](http://www.hartwiginc.com)

**HEMAQ**  
[www.hemaq.com](http://www.hemaq.com)

**Morris Group, Inc.**  
[www.morrisgroupinc.com](http://www.morrisgroupinc.com)

**Thomas Skinner & Son**  
[www.thomasskinner.com](http://www.thomasskinner.com)

## OPEN POSSIBILITIES





# NIMS AWARDED NEW FUNDING TO ADVANCE THE NATION'S PRECISION MANUFACTURING WORKFORCE

EFFORT WILL LEAD TO BETTER MATCHES BETWEEN STUDENTS, WORKERS AND IN-DEMAND JOBS



NIMS is pleased to announce new funding in partnership with the National Network of Business and Industry Associations (National Network), an effort led by Business Roundtable and ACT Foundation, aimed at advancing skills, training and talent development for the precision manufacturing industry. Lumina Foundation and the Joyce Foundation have provided funding support for the initiative.

NIMS will use this investment to analyze and promote how manufacturers can use NIMS credentials to establish competency-based human resources and talent management practices. Competency-based practices include those which place higher value on a candidate's knowledge, skills and abilities rather than a specific degree or experience.

This innovative project is one of 12 being conducted as part of the National Network's efforts to give students and workers clear pathways to meaningful careers while providing employers a skilled, competitive workforce. Each project focuses on addressing the critical workforce needs of its sector, and a specific aspect of the National Network's three-point plan. This plan includes: identifying competencies and promoting credentials that lead

to work; creating more work-and-learn opportunities across the economy; and encouraging more employers to use competency-based hiring practices.

## THE PROJECT WILL HAVE SEVERAL OUTCOMES THAT WILL BE PUBLISHED FOR USE BY ALL EMPLOYERS:

- Translating NIMS credentials to a common language between what defines the competencies in NIMS credentials and what defines performance in the most common jobs in the precision manufacturing industry.

- Creating a Credential Mapping Tool that links each NIMS credential to key occupational areas and job titles.

- Developing Sample Job Descriptions that employers can use that articulate the specific skills needed for in-demand jobs.

- Partnering with several companies to test these tools within their recruitment, screening and hiring processes.

"The benefits of this toolkit will expand beyond industry to support working learners," says NIMS Executive Director James Wall. "The translation tool and the Career Mapping Tool will allow NIMS credentialed candidates to know what skills and credentials they need to advance in their chosen career pathway and help them articulate what their credential means to

employers."

"Business leaders need skilled workers to fill jobs at their companies and make them competitive around the world," says Business Roundtable President John Engler. "This effort will help find new ways to train more people to fill the open jobs and ensure workers have the skills and training they need to be successful."

"ACT Foundation applauds the business-led solutions the National Network has already created which provide the foundation for connecting learning and work, including a profile of Common Employability Skills and a replicable Competency-Based Apprenticeship model," says ACT Foundation Founding Executive Director Parminder Jassal. "These 12 new projects made possible by Lumina and Joyce Foundations will continue to help align the needs and practices of business with the learning, skills development and opportunities individuals require for success."

For more information on NIMS or the 12 projects and organizations receiving funding, go to [www.nimsready.org](http://www.nimsready.org).



## ARE YOU TAKING FULL ADVANTAGE OF YOUR NTMA BENEFITS?



### MEMBERS RECEIVE FEDEX DISCOUNTS!

### TAKE FULL ADVANTAGE OF YOUR FREE MEMBER BENEFITS.

As a member of NTMA, you qualify for a number of valuable benefits designed to help you save money and get the most out of your membership. One of the most widely used member benefits is the NTMA Shipping Program. Enroll in this free program and receive discounts on small package shipments you send or receive:

- Save up to 29%\* on select FedEx Express® services
- Save up to 20% on select FedEx Ground® services
- Save up to 10% on select FedEx Home Delivery® options

### VISIT [PARTNERSHIP.COM/54NTMA](http://PARTNERSHIP.COM/54NTMA) TO ENROLL!

There are no minimums or obligations – just great savings! If you have questions or would like more information, call PartnerShip®, the company that manages the NTMA Shipping Program, at 800 599 2902 or email [sales@PartnerShip.com](mailto:sales@PartnerShip.com).

\*Includes a bonus 5% online processing discount. Full details available at [PartnerShip.com/54NTMA/FedExdiscounts](http://PartnerShip.com/54NTMA/FedExdiscounts).



# WIM SUMMIT BRINGS TOGETHER TOP WOMEN IN MANUFACTURING FOR EDUCATION AND FUN

PARTICIPANTS OFFER RAVE REVIEWS ABOUT FIFTH ANNUAL EVENT

Nearly 300 professional women in the manufacturing sector gathered in Minneapolis, MN on September 23 - September 25 for information, inspiration, and celebration during the fifth annual Women in Manufacturing (WiM) SUMMIT.

WiM is the only national organization specifically dedicated to supporting women in the manufacturing sector with year-round programming and a national directory for women in the industry. The WiM SUMMIT is unique not only for its focus on women in the industry but also for its combination of high caliber speakers, educational sessions, plant tours, innovation demonstrations, and networking opportunities.

"While there are WiM events all across the country all throughout the year, the SUMMIT is the highlight of our calendar," says WiM President Allison Grealis. "The SUMMIT brings together women from the full range of careers in manufacturing to share their experiences and learn from each other. The energy is incredible and the women who attend walk away with new connections and new ideas for success."

Among the impressive lineup of speakers at this year's event was a keynote presentation by Meredith Walker, co-founder and executive director of Amy Poehler's



(L-R) Linda Rigano, Gretchen Zierick, Allison Grealis, Jennifer Shore, Diedra Donald

Smart Girls. Her wide-ranging remarks were full of humorous anecdotes and inspirational advice for personal and professional development.

"The group of women in attendance and speaking were truly amazing and inspiring," wrote one attendee in a survey about the event. "The content was a great mix of trending and timeless information... I left with knowledge and passion to bring back to my career and my team at work to help reach our fullest potentials."

During the SUMMIT's dinner reception on Thursday, September 24, attendees looked on as WiM was awarded a \$100,000 grant from the GE Foundation. The grant will support WiM initiatives to increase women's access to industry-specific education, training, and certification

opportunities.

In addition, more than \$10,000 was raised at the third annual Silent Auction, with proceeds supporting WiM's work.

"If you wonder where all the amazing women in manufacturing are at you should come to the WiM SUMMIT!," wrote another attendee. "Rarely have I ever been surrounded by so many amazing talented women who are all passionate about their careers in manufacturing."

Planning is already underway for next year's SUMMIT to be held in Nashville, TN. See the WiM website for more information.

Stay up to date with the latest information about WiM by following @WomeninMfg on Twitter.



## WOMEN IN MANUFACTURING RECEIVES \$100,000 GRANT FROM THE GE FOUNDATION

FUNDS TO HELP SUPPORT VITAL EDUCATIONAL PROGRAMMING EFFORTS



Women in Manufacturing (WiM) last night announced the receipt of a \$100,000 grant from the GE Foundation. The grant was announced at the fifth annual WiM SUMMIT on Thursday, September 24, 2015 in front of a crowd of nearly 300 professional women in the manufacturing sector.

"We are thrilled to receive this grant from the GE Foundation," says Women in Manufacturing President Allison Grealis. "The growth of the manufacturing sector is vital to the American economy. As a result, this grant from the GE Foundation is truly an investment in women's education and leadership and also in the strength of



American manufacturing.”

The GE Foundation grant will support important WiM initiatives including regional and national programming and, in particular, new continuing education opportunities for women in the manufacturing sector.

“This funding is critical for supporting our efforts to develop and deliver high impact educational opportunities for women in manufacturing,” says Grealis. “Many available programs for personal and career advancement are simply too expensive for women working in small and medium-sized manufacturing companies. But we know that these women – and these companies – could really benefit from enhanced and sector-specific skills development programs and leadership training. This grant will make all the difference in allowing WiM to provide effective and affordable educational opportunities to support the advancement of women in manufacturing.”

“This grant to Women in Manufacturing is part of our Developing Skills program,” says GE Foundation Executive Director, Education and Skills, Kelli Wells. “At the GE Foundation, we are striving to strengthen the economy by narrowing the gap between skills acquisition and the needs of the labor market. By partnering with organizations like WiM we are helping to support women and working to establish a leadership pipeline within manufacturing.”

#### ABOUT WiM

Women in Manufacturing (WiM) is a more than 550-member-strong national organization dedicated to supporting, promoting and inspiring women who have chosen a career in the manufacturing industry. WiM encourages the engagement of women who want to share perspectives, gain cutting-edge manufacturing information, improve leadership and communication skills, participate in sponsoring programs and network with industry peers.

#### ABOUT THE GE FOUNDATION

The GE Foundation, the philanthropic organization of GE, is committed to building a world that works better. We empower people by helping them build the skills they need to succeed in a global economy. We equip communities with the technology and capacity to improve access to better health and education. We elevate ideas that are tackling the world’s toughest challenges to advance economic development and improve lives. The GE Foundation is powered by the generosity and talent of our employees, who have a strong commitment to their communities. We are at work making the world work better. Follow the GE Foundation at [www.gefoundation.com](http://www.gefoundation.com) and on Twitter at @GE\_Foundation.



## GET READY FOR WOMEN IN MANUFACTURING

BY: ASHLEY BONCIMINO , UPSTATE BUSINESS JOURNAL

It’s hard to believe, but the share of women working in the manufacturing industry is the lowest since October 1971. Today, women make up 27 percent of the country’s manufacturing workforce, compared with nearly 50 percent in the labor force as a whole, according to data from the U.S. Bureau of Labor Statistics.

And yet, there seem to be more examples than ever of women succeeding and thriving in manufacturing environments, says Catherine Hayes, executive director of the S.C. Automotive Council and longtime champion of initiatives focusing on women in manufacturing. Hayes volunteers on the Southern Automotive Women’s Forum, is the driving power between a middle school girls event called Girls Auto Know every year, and a vocal advocate of educational and apprenticeship programs that make the industry more accessible to women in all walks of life.

Take, for example, Julia Doherty, who wanted to be one of two things when she grew up: a vet, or someone who worked with cars.

“I love cars,” says Doherty, whose father’s 20-year career as a BMW engineer had always given her the impression it would be a good field to work in. “When I graduated

[high school], I wasn’t sure exactly what I wanted to do, and automotive was just what I knew.”

Today, the 24-year-old works as a quality engineer in South Carolina, where a two-year degree from Greenville Technical College lets her “follow in [her father’s] path.” She is approached frequently by other women interested in how she got her position.

“What I’d like to do is change the female perspective of it, because they always say it’s a man’s field,” says Doherty, adding that she never felt targeted or singled out, despite being one of the only female students in her college classes. “But whenever someone is interested in the field, I say go for it, because the opportunities are endless and the manufacturing field is looking for women.”

And looking they are, says Paige Reed, CFO of Greenville-based global automotive firm Sage Automotive Interiors. While she says Sage is able to find qualified people, Reed notes a growing industry need for skilled workers. Workforce development programs have responded to that need, meaning that opportunities abound.

Reed says she went against the grain when she decided to go into manufacturing instead of public accounting right out

of school, but the decision taught her more about running a complex business and supply chain that ultimately led her to her current position.

“You learn a lot when you work in a challenging work environment,” says Reed, who also says she grew up with family in manufacturing.

Part of the lack of women might be a matter of role models, says Nancy Heillemann, director of operations at St. Jude Medical, where they work on medical devices. Heillemann even taught college classes, and was often the only female in the room.

“I think that some women are just intimidated by the idea,” she says. “Other than that, it may be that they don’t think it’s something they can do.”

Hayes says the numbers may get a bump in a few years due to the strength of current efforts to recruit women to the industry.

“As we talk about the shrinking workforce, there’s opportunities there. There are people in lower-wage positions who may not be that stimulated or engaged in what they’re doing, and they really don’t know how cool manufacturing is,” she says. “That’s a huge opportunity for women.”



# SNK AMERICA OPEN HOUSE SHARES NEW TOOL TECHNOLOGY AND EXPERT INSIGHT



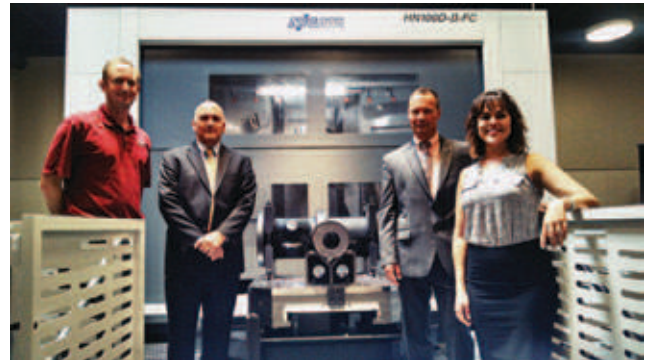
Demonstrating machine tool technology was just a starting point for SNK America's Open House held last September. SNK understands that attendees of such an event are also seeking to connect with experts and influencers in manufacturing while looking for new ideas to improve their business and stay at the front of a fiercely competitive marketplace. NTMA National Account Manager, Tiffany Bryson, was among the attendees ready to experience the newest technology and hear insider perspectives.

SNK displayed 12 aggressive applications across 4 machining centers along with 10 short-seminars. The team at SNK and their associated partners sought to ensure that every attendee left feeling inspired to grow their business and confident in their ability to secure a powerful advocate for their success.

"The educational tracks that the SNK team offered at the Open House gave attendees valuable takeaways, support, and an opportunity to share knowledge in an intimate setting," says Bryson. "The whole day was excellently done and packed with a plethora of knowledge."

A technology highlight for the event was the Nügata HN100D-II-FC, a horizontal machining center whose facing head allows any 2-axis turning process to be conducted at the machine. Performing relevant cutting applications for customers helped them fully grasp the impact of such capability – the type of grasp that is

only achieved by seeing the process in-person and interacting with knowledgeable engineers. SNK had several customers graciously allow their parts to be



Left to Right: Doug Abbott, VP of Operations of Abbott Workholding, Mike McGuire, National Sales Manager, SNK America. Mike Schlipf, National Account Manager and Tiffany Bryson, NTMA National Account Manager

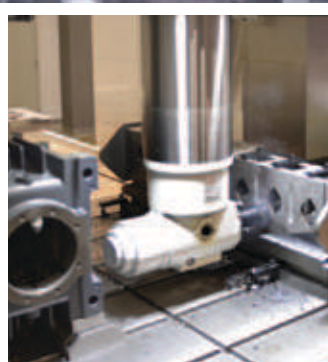
used as machining examples, assuring that the applications were relevant for those viewing.

Among the four new machines were the World Premier of the SNK RB-4M and the SNK CMV-100. The first of which, a 5-face vertical bridge mill, was contextualized with a presentation on 5-face machining.

"While 5-face machining isn't necessarily new, many people who make parts that merit this technology haven't fully grasped the challenges that we have been able to overcome and the advantages of such technology," says Mike Schlipf, SNK America. "Our goal was to educate customers on the technological options that are available in the marketplace and how it can impact their business."

Keeping with this theme, SNK and their partners provided 9 other presentations each day of the event. Topics ranged from tool path optimization, vibration analysis in high performance applications, cells and systems for unattended operation, carbide technology for aerospace alloys, advanced tool changing technologies and high speed profiling software.

"We wanted to make this event worthwhile for our customers. To best do that, we chose to provide valuable, educational content," says Austin Gooch, SNK America. "Leaving a production facility to come to an Open House is a sacrifice, and we gave to those who made it. That's why we prepared these seminars."





An increasing number of assertive energy salespeople are targeting manufacturers through mailings, phone calls, and door-to-door soliciting. "Slamming" occurs when a misleading salesperson obtains a customer's electricity account number, and then switches the account to a different supplier without the customer's knowledge or consent. This effectively terminates the customer's existing electricity supplier contract. Manufacturing companies that experience staff turnover or changes in managerial structure are particularly vulnerable to slamming.

Some energy salespeople are unlicensed, inexperienced, or simply unscrupulous. Not only do these unethical solicitors dupe customers, but also they often violate "do not call" lists and marketing regulations set forth by state public utility commissions (PUCs). Awareness and education are your best defense against the unnecessary costs and hassles associated with slamming.

To prevent slamming from happening to your facility:

1. Make your employees aware that misleading callers and visitors are active. Even employees that are unauthorized to discuss your utility bills or make contract decisions can be hounded by callers and tricked into providing confidential information.

2. Protect your energy bills and account numbers as you would treat any confidential business information. Your electricity account

number is often the only requirement for an unauthorized supplier switch.

3. Beware of a salesperson that walks into your business and claims to represent the local electricity utility company, Delmarva Power. Anyone who works for the utility already has digital access to all of your account information.

4. Beware of promotional offers that require your signature or verbal commitment.

5. Advise your employees to block salespeople from engaging with other employees.

6. Ask callers if they are properly licensed with the state PUC.

7. Request to be removed from call lists.

8. Review your electricity bill each month for unauthorized charges or changes. Make sure the correct supplier is listed on your utility bill.

## PENALTY FEES

Most electricity suppliers charge Early Termination Fees (ETFs) to customers that terminate contracts before expiration. If customers request to reenroll dropped accounts, many suppliers charge "gap in service" penalties. Some suppliers are less likely to reenroll accounts that are terminated within a three-month timeframe before contract expiration dates.

Each supplier contract is different in how ETFs are calculated. Some suppliers assess specific dollar amounts per meter. Other suppliers calculate ETFs based on each con-

tract's remaining term and electricity usage profile, or electricity market prices at the time of early termination. Survey reports by the Energy Research Council show that seven out of every 10 small-to-medium business owners are unaware or do not believe that their electricity supply contract has an early termination provision.

## CUSTOMER STORY

"Like so many business owners, I'm bombarded with phone calls from energy salespeople. Recently, I told one particular caller that I was locked into a supplier contract. The caller assured me that he wouldn't jeopardize my current contract, but he promised me an additional 10% discount on my current locked-in fixed price. I reluctantly agreed. Soon afterward, my supplier dropped my account and would charge me early termination fees. I attempted to contact the salesperson that misled me, and he was unreachable."

## CUSTOMER STORY


"A few weeks ago, I handed over my electricity bill to a man who visited my office and claimed to represent my utility company. He offered to evaluate my electricity bill as a complimentary service. A few weeks later, my electricity supplier unexpectedly dropped my account. Without my consent or knowledge, the man had obtained my account number from my bills and canceled my electricity supply contract for my business. I was at risk of being charged hefty termination fees for canceling my supply contract before its expiration date. I had no idea that the contract was canceled. I called my utility and determined the name of the company that canceled my electric supply without my knowledge. I reported the company to the Better Business Bureau, and sequentially learned that the man who misrepresented himself was no longer with the energy company."

## SOLUTION

Since 2001, the National Tooling and Machining Association has endorsed APPI Energy to provide data-driven procurement and consulting solutions to members. The firm has vetted and approved 54 supplier companies and analyzed more than 100 different supply contracts to serve NTMA members. If you have any questions about slamming, your energy bill, or your electricity supplier, contact APPI Energy at 800-520-6685.



SAVE THE DATE




**HUMAN RESOURCES ROUNDTABLE**

BOSTON

## NTMA HUMAN RESOURCES ROUNDTABLE

WEDNESDAY NOVEMBER 18, 2015

**Hosted by**



**CliftonLarsonAllen**

300 Crown Colony Drive, Suite 310  
Quincy, MA 02169

**8:00am - 4:30pm**

Continental Breakfast and Lunch included

**Tuesday November 17 - Networking Reception & Dinner**

For registration information or questions contact: Kristen Hrusch • khrusch@ntma.org • 216-264-2845

**Registration Rates:**

Early Bird Member	\$400
Deadline 10/28/15	
Regular Member	\$475
Non-Member	\$525



## MAZAK SMARTBOX LAUNCHES MANUFACTURERS INTO THE IIOT AT DISCOVER 2015

COLLABORATION WITH CISCO DELIVERS HIGHLY-SECURE  
OPERATIONS MONITORING AND ANALYTICS

In an industry-shaping collaboration, Mazak Corporation, together with information technology (IT) leader Cisco and machine-to-machine solutions provider MEMEX, Inc., have developed what is described as an industry first – a “launch platform for easy and highly secure entrance into the Industrial Internet of Things (IIoT).” Called SmartBox, this technology represents a huge leap in digital integration across manufacturing. Access to real-time manufacturing data is used to improve overall productivity and responsiveness to customer/market changes. Using MTConnect technology as the foundation, SmartBox connectivity of machines and devices allows for enhanced monitoring and analytical capabilities including advanced cyber security protection.

Mazak is showcasing the SmartBox technology during its DISCOVER 2015 Technology and Education Event, held October 27-29 and November 3-5 at its North American Manufacturing Headquarters. The power of SmartBox will be demonstrated in one of the automated cells as part of the company’s own manufacturing operations. Each of the cell’s four machines are outfitted with a SmartBox and sensor array package, giving event attendees a firsthand look at the device in action within an actual manufacturing environment and network.

The SmartBox is yet another component within Mazak’s dynamic iSMART Factory concept and one that takes advantage of Cisco’s Connected Machines solution to provide insights into machine operations. Advanced manufacturing cells and systems, along with full digital integration, can achieve free-flow data sharing, i.e., process control and operation/equipment monitoring. The iSMART concept also incorporates Mazak’s SMOOTH Technology – a complete process-performance technology platform that includes the various levels of Mazak’s new Mazatrol Smooth CNC with advanced machine hardware and servo systems – working in tandem with the MTConnect standard connectivity protocol.

Mazak also developed SmartBox to work with any machine regardless of make,

model or age, and will offer it in various configurations/kits based on the scenarios and challenges in which the units will be used. The device physically mounts to the side of machines without having to integrate into a machine’s electrical cabinet. With several standard input/output connecting ports, SmartBox lets users quickly and easily connect any standard off-the-shelf sensors to the system for machine data gathering and condition monitoring. One SmartBox may service several machine tools along with other associated manufacturing equipment, depending on the application.

At the heart of the SmartBox is Cisco’s Connected Machines solution, based on the IIoT System, designed specifically for industrial environments and equipped with an MTConnect software agent. Using a fog computing model, the MT Connect software runs directly on the ruggedized Cisco Industrial Ethernet (IE) 4000 switch – providing real time visibility and insights into data right on the factory floor.

The MEMEX software installed in Mazak’s own factory allows for monitoring analytics of machines, test stands and other equipment within the plant. The Cisco hardware is designed to help prevent any issues with unauthorized access from both directions – to or from the machines and equipment within a network. SmartBox satisfies the highly critical security concerns of IT departments when connecting legacy equipment to a plant’s main network for the purpose of gathering manufacturing data via the MTConnect protocol.

“With the development of SmartBox, Mazak continues to drive toward its iSMART Factory concept and connecting today’s shops to the Industrial Internet of Things (IIoT) to achieve levels of efficiency and productivity never before realized,” says Brian Papke, President of Mazak Corporation. “And while our concept centers around open connectivity and the Internet, we at Mazak believe it is our moral obligation to also provide customers the highest level of security possible with SmartBox. As with all the technology we develop, Mazak has first implemented

SmartBox into our own operations before expecting customers to wholeheartedly embrace the system.”

The underlying Cisco networking platform helps ensure that IT technicians will be familiar with SmartBox’s operation and can use it to quickly and easily control and manage network security. Also, the hardware allows manufacturers to enable secure machine communications through secure access and identity policy mechanisms. Third parties, such as equipment suppliers, can then log on to a company’s network and access only those machines equipped with a Mazak SmartBox.

“This is great example of how Cisco works with our ecosystem of partners to help customers capture the value of digitization,” says Tony Shakib, Vice President, Vertical Solutions, at Cisco. “Cisco’s scalable and secure IIoT platform makes it possible for partners like Mazak and MEMEX to quickly launch new IIoT offerings that provide high-value customer experiences and business outcomes. We’re helping our OEM partners transform their business from selling products to selling industrial services.”

### ABOUT MAZAK CORPORATION

Mazak Corporation is a leader in the design and manufacture of productive machine tool solutions. Committed to being a partner to customers with innovative technology, its world-class facility in Florence, Kentucky, produces over 100 models of turning centers, Multi-Tasking machines and vertical machining centers, including 5-axis models. Continuously investing in manufacturing technology allows the Kentucky iSMART Factory to be the most advanced and efficient in the industry, providing high-quality and reliable products through its “Production-On-Demand” practice. Mazak maintains eight Technology Centers across North America to provide local hands-on applications, service and sales support to customers. For more information on Mazak’s products and solutions, visit [www.mazakusa.com](http://www.mazakusa.com) or follow us on Twitter and Facebook.





# NTMA 2016 EVENTS

## JANUARY 13, 2016

Plant Managers Roundtable  
North Carolina

## FEBRUARY 10, 2016

Sales & Marketing Workshop  
Dallas/Austin, TX

## FEBRUARY 17, 2016

Financial Managers Roundtable  
Atlanta, GA

## FEBRUARY 28- MARCH 1, 2016

Chapter Leadership Summit  
Palm Springs, CA

## MARCH 2-5, 2016

MFG Meeting  
Palm Desert, CA

## MARCH 23, 2016

Human Resources Roundtable  
Indianapolis, IN

## APRIL 11-13, 2016

NTMA/PMA Legislative Conference &  
Emerging Leaders Conference  
Washington, D.C.

## APRIL 16-24, 2016

Japan Tech Tour

## APRIL 20, 2016

Financial Managers Roundtable  
Pittsburgh, PA

## MAY 20, 2016

Workforce Development Roundtable  
California University of Pennsylvania  
California, PA

## MAY 20-22, 2016

NRL Competition  
California University of Pennsylvania  
California, PA

## JUNE 8, 2016

Financial Managers Roundtable  
Denver, CO

## JUNE 8-10, 2016

Emerging Leaders Conference  
Chicago, IL

## 2016

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## SEPTEMBER 12-17, 2016

IMTS  
Chicago, IL

## SEPTEMBER 28, 2016

Sales & Marketing Workshop  
Philadelphia, PA

## OCTOBER 12-14, 2016

Fall Conference  
Charlotte, NC

## OCTOBER 26, 2016

Plant Managers Roundtable  
Boston, MA

## NOVEMBER 2, 2016

Sales & Marketing Workshop  
TBD

## NOVEMBER 2-3, 2016

Supply Chain Network Fair  
TBD

## NOVEMBER 16, 2016

Plant Managers Roundtable  
Denver, CO

\*All Tech Seminars have a reception Tuesday evening

NATIONAL TOOLING & MACHINING ASSOCIATION  
1357 Rockside Rd.  
Cleveland, OH 44134



# THE RECORD

**Save the Date**

**2016 Fall Conference  
The Marriott City Center  
Charlotte, North Carolina  
October 12-14, 2016**

