

**NTMA**

# THE RECORD

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## **NTMA-U IS PROUD TO ANNOUNCE OUR FIRST GRADUATING CLASS**

NTMA-U experienced and celebrated our first graduating class in June 2014. —p9

## **NTMA LAUNCHES SUCCESSFUL INAUGURAL CFO ROUNDTABLE**

Sponsored by Akron-based BCG & Company, the first-ever NTMA CFO Roundtable was an assembly of 16 like-minded folks from NTMA membership – those responsible for the numbers end of NTMA businesses. —p20

## **WASHINGTON REGULATORS LOOK SKYWARD**

Frustrated by Congressional inaction on climate change, the Administration decided to launch an effort this month through the Environmental Protection Agency (EPA) to limit “greenhouse gas emissions” from existing coal-fired power plants. —p25

## **TO 3D, OR NOT TO 3D?**

Are you wondering how additive manufacturing (AM) is restructuring supply chains, or whether or not to add a 3D printer to your shop? —p29

**NTMA**

## **EMERGING LEADERS**

**New Name. New Motivation. New Mission.  
NTMA's NEWEST Team —  
The Emerging Leaders**

AT ONE POINT IN YOUR CAREER, YOU WERE AN EMERGING LEADER. —p7

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- Enhanced Listing: Your Logo + verbiage (Up to 50 words) to spotlight your company or event you are hosting at IMTS - \$325

### FEATURED HIGHLIGHTS

- Basic and Enhanced listings by Building
- Must Attend Events at IMTS
- "Shout Out Section" - A listing of NTMA members who will be attending IMTS



## CHAIRMAN'S CORNER

TED TOTH / NTMA CHAIRMAN OF THE BOARD

This month we will review the so-called “skills gap” and then examine some NTMA tools under our Education Team. The Education Team is part of our Workforce Development Leadership Team.

At this year's One Voice Legislative Conference, delegates were asked to be part of a skills gap discussion panel at the National Press Club. It was great for us to tell our side of the story on this large a platform. We know that some in the press believe the skills gap was generated by the manufacturing industry not wanting to pay higher wages to attract new workers. This misconception is far from the truth. We need to understand how the general public views manufacturing. Many still consider manufacturing to be a smoke-stack industry: their vision is that of a dark, dirty, dangerous and dumb work environment. NTMA's 6S Excellence Program was developed in 2007 by our Technology Team in part to upgrade the image of our industry.

We used to define our industry as metalworking. Now we use precision manufacturing to better define what we do. We do more than just metalworking or machining.

Some view our workers as blue collar workers – those who work with their hands and backs on a long assembly line. Due to rapid advances in technology, we now define workers as “blue-tech” – they work with their hands and their heads; they use technology such as computerized machines and robots.

There are two main issues with the skills gap. The first is the rate of growth in our industry. Half of the current jobs in manufacturing did not exist 25 years ago. In the last 25 years the industry went through a rebirth due to the advancement of computers. As technology changes virtually every day, employers and schools struggle to keep up with training. Many learning institutes have closed or downsized their precision manufacturing

training facilities, making it more difficult for them to upgrade to move along with technology. The fact that many schools have dropped their support of apprentice programs and that fact that many young employees do not have the commitment to finish a four year apprentice program adds to the gap.

We also know that high schools get credit and recognition for sending students to colleges, not trade-schools. We need to encourage community colleges to develop more industry certification or credentialing programs along with their degree programs.

In the past large manufacturers like GE, RCA, Lockheed, Boeing and Westinghouse all had their own in-house apprenticeship programs. These days many of these super manufacturers actually produce few precision parts. They have pushed the training need down the supply chain, to the little guys like many of our members. NTMA's average member employs 30 people and often does not have the infrastructure like the super manufacturers had in the past to produce large number of apprentices.

So it is up to our industry to develop training programs like NTMA-U.

We can develop great in-house training programs, but we still are challenged with how to fill the gap with new employees. I believe that the NTMA has to develop additional employee feeder programs in parallel to our training programs, so that we have a steady of new talent flowing back into our industry. NTMA's National Robotics League (NRL) is growing exponentially and certainly makes large strides in gaining not only experience, but also public perception of the industry.

We still have to resolve the image problem, but with programs like the 6S Excellence program and the NRL we are on the right track. Reducing the skills gap will not be a fast process; we need short and long term solu-

tions. I feel that it is always going to be there; we just need to continue building and moving bridges.

For the last two years the Workforce Development Leadership team has been led by Patrick Shrader from Arundel Machine Tool Company (Arundel, ME). This month Kevin Ahaus from Ahaus Tool & Engineering (Richmond, IN) will assume leadership of the team. We thank Patrick for his commitment and support.

The Workforce Development Team includes two standing teams: Education and Manufacturing Technology. This month we will visit the Education team; next month we will visit the Manufacturing Technology team.

The Education Team is lead by Alice Overton of Overton Industries (Indianapolis, IN). Their team is responsible for a few tasks:

- Overseeing and advising the NTMA-U program
- Reviewing textbooks for upgrading or replacement
- Developing new ideas for training needs
- Endorsing outside training tools and textbooks

NTMA-U is NTMA's own learning university. It is also where NTMA stores and launches all its training programs, the tools of the training umbrella.

### NTMA-U TOOLS AND PROGRAMS:

NTMA U is the original online training program developed by the Education Team, assisted by Ken McCreight, NTMA Vice President and Education Director.

NTMA U provides a few training tracks:  
**1. A TRACK TO SUPPORT THE LEGACY FEDERAL APPRENTICESHIP PROGRAM, A KNOWLEDGE AND TIME BASED TRAINING PROGRAM**

- Legacy federal apprenticeship program.
- 4 years or 8000 hours of hands-on com-

CONTINUED ON – P5



# THE RECORD

## OPERATIONS & EDITORIAL

Dave Tilstone, President

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[ssafranski@ntma.org](mailto:ssafranski@ntma.org) for editorial content.

Design & layout by Z Graphics

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pany training.

- 560 hours of classroom knowledge training.

## 2. A TRACK FOR COLLEGES

- 6 semesters over 3 years.
- Up to 24 articulated college credits.
- The program was developed as an online instructional program; Ken acts as the professor, aiding the students when needed.

- All training is launched from the NTMA's online LMS.

## 3. THERE IS A TRACK FOR HIGH SCHOOLS

- Being piloted in Maine, and lead by Patrick Shrader (Aurundel Machine Tool Company, Inc.)

- The program uses some NTMA-U semesters and students work co-op at Patrick's

plant.

## 4. THE LAST TRACK SUPPORTS THE CLASSROOM/KNOWLEDGE FOR NIMS CREDENTIALING.

NTMA-U has enough knowledge to help students pass the written NIMS tests; however, the company needs to provide the skill/competency section of NIMS testing.

- NIMS (National Institute for Metalworking Skills) is a skills and competency based training system. In 1995 NTMA was a founding member of NIMS.

- NIMS defines the skills standard, what skills will be required for a subject, such as what skill are required to learn entry level milling.

- NIMS then provides a written test

CONTINUED ON – P6

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and a practical part drawing. Students need to make a good part to prove they have the competency.

- Students throughout the country take the same test, to earn the same credential.

- To earn a NIMS apprenticeship students or employees stack their credentials to earn different apprentices.

- Learn more about NIMS at [www.nims-skills.org](http://www.nims-skills.org)

We have been asked “which apprenticeship program is the best?” There is no right answer; both programs are efficient in training and they have equal pros and cons. It is based more on what is being taught in your area. The goal of the Education Team is to provide a variety of tools to our members and/or their schools, so they can train their workforce.

#### NTMA U-MODULES

Subjects were pulled from the original NTMA-U Legacy program and developed into small modules. Some of the modules are linked to NTMA textbooks, Blueprint Reading and Shop Math. They are developed in three levels: basic, intermediate and advanced. NTMA-U modules were developed to provide skills upgrading for incumbent employees, a pinpoint training program and will be launched in the fall.

#### NTMA U-APTITUDE TESTING

Another tool is NTMA’s online Aptitude Test, which assesses the aptitude of new or incumbent employees. Aptitude tests are now 100% online and cost \$35 per test.

#### NTMA-MPM

(Military to Precision Manufacturing) is one of newest tools, developed outside NTMA but endorsed by the Education Team and NTMA. It is an online fundamentals training program for Veterans. It includes 12 lessons from introduction to precision manufacturing to basic blueprint reading. It acts as a filter: if a Vet does not complete the course, they probably are not interested in the career. Once the Vet passes the program, they will be introduced to an NTMA chapter contact nearest to their hometown. The goal is to develop an employee feeder program for our members.

We feel that Veterans have a good foundation to build on:

- They understand the importance of coming to work on time.
- They can follow instructions.
- They have worked as a team.

MPM filters veterans out to help them identify those best-fitted for a career in manufacturing. Members can use the Veteran’s GI bill to offset their wages and cover the con-

tinuation of training through other NTMA-U training programs. Further details on NTMA-MPM will be available soon, as it is scheduled to be launched by the year’s end.

We believe that the Education Team will develop continue to develop training programs that support individual NIMS credentials.

Many great tools have been developed by the Education Team Members and we feel they are just getting started. You can find over 25 training-related publications on the NTMA website.

We believe that the NTMA will be the go-to place of precision manufactures for skills training.

Next month we will review the tools of the Workforce Development’s Technology Team as well as IMTS 2014.

THEODORE O. TOTH, JR. (TED) /  
NTMA CHAIRMAN



## 48 WATT VAPOR PROOF LED LIGHT FIXTURE WITH EMERGENCY BATTERY BACKUP RELEASED BY LARSON ELECTRONICS

With over 40 years as a leader in the industrial and commercial lighting industry Larson Electronics continues its commitment to providing high-grade lighting equipment to specialty markets with the release of a four foot vapor proof LED light fixture with an emergency battery backup ideal for outdoor applications.

The GVP-EMG-48-2L-LED from Larson Electronics is similar to our popular explosion proof LED fixtures that provide an LED alternative to fluorescent fixtures. These LED fixtures produce more light output with longer lamp life and are vapor proof and impact and vibration resistant. The lamps in this vapor proof fixture are specially designed LED T8 series bulbs which produce 2,160 lumens and have a correlated color temperature of 5,600K. These fixtures are designed for operators who wish to replace fluorescent fixtures with a unit that offers better light output, longer lamp life with reduced maintenance costs as well as lower operating costs. By eliminating

the ballast that is normally associated with fluorescent fixtures, the weight of the fixture is significantly reduced and a slimmer profile is created. With solid state LED light tubes, this fixture draws less than 0.4 amps of power while offering durability and versatility that common fluorescent fixtures cannot match.

This emergency LED light includes a battery backup unit that adds emergency functionality to the fixture. The light will run on one bulb at the standard UL suggested 90 minutes after power is lost. The light recharges the battery once the electrical power is restored. Standard configuration includes a single emergency battery backup that is automatically recharged and kept in a ready state. The integral aluminum heat sink tube backings provide cool operation and long LED life, while a simple latching system seals the lens cover to the housing and provides easy access for re-lamping. These units are designed to be surface mounted or hung from cable or chain and includes built in mounts. The GVP-

EMG-48-2L-LED is multi-voltage capable and operates on any voltage from 110 volts to 277 volts AC and is also offered in an optional 12-24 volts DC.

“The solid state design of the LED lamps provides this fixture with a longer operational life without high maintenance costs,” said Rob Bresnahan with [LarsonElectronics.com](http://LarsonElectronics.com). “The two LED tube lamps in this unit provide more output and longer lamp life than that of a fluorescent fixture.”

Larson Electronics produces a full range of industrial and commercial lighting equipment, telescoping light towers, explosion proof lighting, and LED work lights. To view the entire Larson Electronics line of industrial grade lighting solutions, visit them on the web at [LarsonElectronics.com](http://LarsonElectronics.com). You can also call 1-800-369-6671 to learn more about Larson Electronics’ lighting products or call 1-214-616-6180 for international inquiries.



# New Name. New Motivation. New Mission.

## NTMA's NEWEST Team –

## The Emerging Leaders



At one point in your career, you were an emerging leader. From the time that you woke up every morning to when you went to bed at night, you were trying to forage for new information or knowledge that could help you move up the ladder, both personally and professionally. Perhaps you were a young engineer trying to glean any and all info from a senior engineer. Maybe you were a new salesperson trying to learn from the top breadwinner. Each of us has had mentors and key relationships that have guided us to the spot where we are today.

NTMA's newly minted Emerging Leaders Team is working to leveraging this experience and harness it to develop our young (and not so young) workforce.

The group understands that we are all striving to be better, to work toward something more. The Team is developing programming that will be designed to help all NTMA members foster development in their companies. With targeted topics, the team's content will be effectively training your next level of management – be it your next engineering manager, your operations manager or even the owner – in a host of ways. Through a mixture of online content, webinars and in-person workshops, programming will allow the Emerging Leaders' Team to create a foundation of content upon which Emerging Leaders will grow to be the next generation of the NTMA and the manufacturing industry.

Over the course of the next few months you will see more information about the Emerging Leaders Team and how we are helping to prepare the next wave of manufacturing leadership. By partnering with industry leaders and knowledge experts, the team is ensuring that the future of manufacturing is strong.

Now is the time to collaborate as an industry, and more specifically as an association, for the future of our businesses. With topics such as “finance for non-financial managers,” “managing transition from coworker to boss” and “government affairs and effects on business,” up-and-coming industry leaders can broaden the depth of their understanding while continuing to grow within their positions.

***To make this goal a reality, the Emerging Leaders Team needs your help. We are creating a new database aimed at delivering content and programming to the industry's emerging leaders. In an effort to grow the program we ask that all NTMA members involve their own emerging leaders. First we must know who you/they are. To sign up yourself or your key emerging leaders, please send a list of your company's emerging leaders (names, contact details) to Kelly Kasner (kkasner@ntma.org) There is no obligation to participate nor is there any cost associated with partnering with NTMA's Emerging Leaders.***

A majority of the programming will be web based, either through email, webinars, or NTMA website content. In addition,

The Emerging Leaders Team is also in the early stages of planning a 2015 Emerging Leaders' Summit. This will allow the future leaders of our companies to network and expand their understanding of both manufacturing and leadership. This collaboration can have a truly remarkable effect on an individual's development.

As Emerging Team Leader, I would like to personally invite each and every NTMA member company to become involved in this venture. Being an emerging leader and future 3rd generation owner of my family business, I find it crucial that we act now as an industry and an association to capitalize on the amount of experience and knowledge that can be found today before it departs. I see this as a crossroads of manufacturing. With the average age of the skilled manufacturing workforce being nearly 56 years old, let's capture the skills and knowledge that was learned over that 35 years and put it to work for the next 35 years in the future.

To contact the Emerging Leaders Team, please email Zac Overton at [zac@overtontind.com](mailto:zac@overtontind.com).



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**TIME MACHINE, INC.**  
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Polk, PA 16342



# BIG KAISER rolls out red carpet for NTMA Purchasing Fair

Partnership with DMG MORI on hosting business development event a huge hit with customers and NTMA members

Through the commitment and dedication of national associate member Big Kaiser and DMG MORI, Hoffman Estates, IL was the host site for the national Purchasing Fair that was held June 3-4. CEO and President, Chris Kaiser opened up the doors of his headquarters and hosted the opening reception and all day event of “speed dating for new customers” for the NTMA. Together with DMG MORI President Mark Mohr and Senior Executive Vice President Randy Harland, NTMA business seminars experience a new platform.

It is fair to say that the infusion of new energy in the business development seminars offered through panel discussions were not only well received but strongly recommended as the better approach to programming for the Purchasing Fair. Contract negotiations, how to market your business and insight from OEM customers at the purchasing fair sharing their expectations of suppliers were topics that received high marks on our event surveys.

This pilot of hosting NTMA national events at the headquarters of National Associate Members is a strategy we will continue to embrace. Please look to find us in California in January 2015 for our next Purchasing Fair. Again, thank you to BIG Kaiser for hosting the event and to DMG MORI for partnering with Big Kaiser in their support of the NTMA.

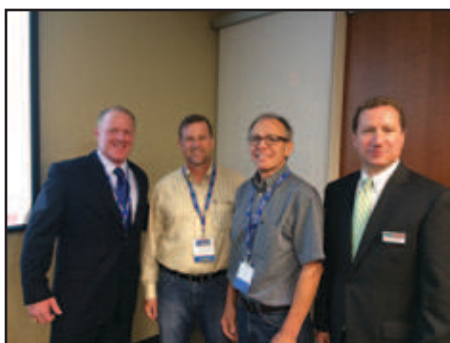


Anna Kessler (DMG Mori), Dana Super (Big Kaiser), Dave Tilstone (NTMA), Jack Burley (Big Kaiser), Tim Stapula (Big Kaiser), Kent Gladdish (TMA), Chris Kaiser (Big Kaiser), Tiffany Bryson (NTMA)



Left: Randy Harland (DMG Mori), Mark Mohr (DMG Mori), Dave Tilstone (NTMA) and Marlow Knabach (DMG Mori)

Below: Guest, Gabe Draper and Zac Overton



Pete Davis (Dundee Manufacturing Company, Inc.), Arnold Eichhof (Prima Precision Industries), Steve Schler (ProMold Gauer) and Randy Harland (DMG Mori)



Patrick McGuire (DMG Mori), Michael Bruns (Arnold Gauge Company, Inc.), John Bauer (Choice Castings, Inc.), Fred Messmer (Big Kaiser) and Michael Bryk (Aluminum Alloys)



Big Kaiser rolls out the red carpet for the NTMA - Chris Kaiser, CEO Big Kaiser, Jack Burley Senior Vice President Big Kaiser, Dave Tilstone NTMA and Tim Stapula, Marketing Director Big Kaiser





# NTMA-U is Proud to Announce our First Graduating Class

NTMA-U experienced and celebrated our first graduating class in June 2014. The graduates have completed over 600 hours of "On-Line" technical training in courses developed by the NTMA Education Team Members: Alice Overton (current Education Team Chair), Christine Jensen, Dave Sattler, Patrick Shrader, Joe O'Dell, Eric White, Kevin Ahaus, Tim McCord, Michael Kerwin, Patrick Walsh, Phyllis Miller, Hank Epstein, John Dalrymple, John Shegda and Rich Ditto as well as former team members Herb Homeyer (former Team Leader/Team Member), Pam Rubinstein and Mark Romanchuk.

The NTMA is extremely excited and pleased to be able to invite our top three graduates to the 2014 Fall Conference. Each and every one who attends Fall Conference in New Orleans will have the opportunity to meet face-to-face with these three amazing young men. The graduates' highlight will be their receipt of graduation certificates at the General Assembly. They have agreed to briefly share their NTMA-U experience at the General Assembly and then each will be available throughout the day to meet with anyone interested to discuss their experience of attending the first nationally recognized online apprenticeship training program. We are extremely proud of all our graduates and we wish them the best of luck in their careers.

NTMA-U will be transitioning from our current structure to individual course modules this fall on August 15th. Courses will include basic and intermediate math, shop technology, blueprint reading, intro to CNC, metallurgy, GDT, SPC, specialty tooling, specialty steels, jig and fixture making, die making and mold making.

NTMA-U continues its growth, with eight training centers currently using the NTMA-U coursework as their

primary machine technology course materials. NTMA-U has experienced a steady 20 percent growth in enrolling member companies and students within each new semester.

Modules will be offered to our members as a membership value, at only \$199 per module. Additionally, any member company can enroll any "one" of their employees into any three courses at an additional discounted tuition of \$148 each course, or a total cost of \$449 for all three courses.

NTMA-U is proud to be the only

national online program currently certified and approved by the Federal Bureau of Apprenticeship and Training - Department of Labor. NTMA-U will continue to be NIMS tracked and will continue to carry 21 articulated college credits to the University of Akron.

For more information please contact NTMA Vice President Ken McCreight at [kmccreight@ntma.org](mailto:kmccreight@ntma.org) or call Ken at NTMA's national office (216) 264- 2834.



## NTMA-U LAUNCHES NEWEST MODULE

NTMA-U is very pleased to announce the launch of the newest module "Metallurgy for the Machine Technician." This course will be added to the already extensive list of NTMA-U modules and it will also use the newest NTMA textbook with the same name as the module. This textbook was made possible by the generosity of Joe Powell, President of Akron Steel Treating Company (Akron, OH). The new textbook was authored by Joe Powell and Ken McCreight.

When asked about the creation of the latest NTMA Textbook, Ken McCreight, Vice President of the NTMA said this about the textbook and the Co-Author, Joe Powell: "A great deal of thanks goes out to the Akron Steel Treating Company, Joe Powell, who shared his expertise and the content from his book "Heat Treating for the Competitive Edge" and who made this new NTMA textbook possible. Thank you to Joe for his generosity of time in editing text material. Joe not

only wrote a vast majority of the materials within the textbook, he also gave us his permission to share this material with NTMA members.

Joe and his daughter Christina hosted Ken in a tour of Akron Steel Treating Company. Joe has developed an innovative heat treating process called "IntensiQuench." With the advent of intensive water quenching, there are now more options to use lower alloy materials (with less hardenability) but still achieve the desired hardness and hardness depth. With the higher hardenability offered by the faster and more complete intensive water quenching process, combined with the compressive residual stresses intensively quenched parts can often outperform higher alloy parts quenched in oil or gas quenched. For more information see IntensiQuench® at [www.akronsteeltreating.com](http://www.akronsteeltreating.com).



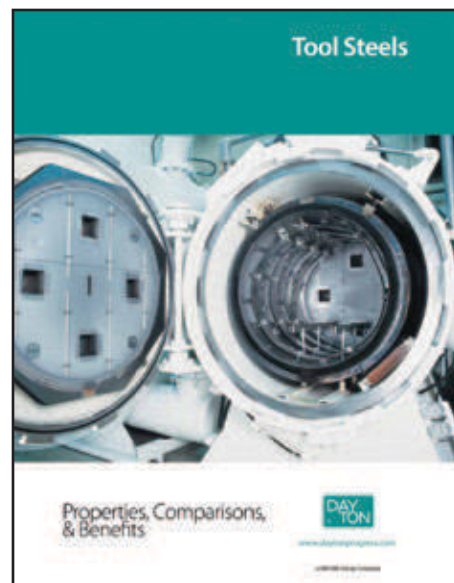
# NEW DAYTON PROGRESS LITERATURE DETAILS TOOL STEEL CHARACTERISTICS AND HEAT TREATMENT OPTIONS

Dayton, OH - Wear resistance, toughness and compressive strength are just a few of the characteristics of Tool Steels, detailed in a new 6-page, full-color brochure available from Dayton Progress Corporation. Available in print or online at <http://www.daytonlamina.com/tool-steels>, this informative brochure guides readers through the various properties and benefits of some common Tool Steels, allowing the best selection for a specific application. In addition, the brochure also details the heat treating processes (including both heating and cooling of the material) to further manipulate the tool steels to achieve a desired result. A thorough breakdown of common Tool Steels is also provided so that readers can easily pick which steel would work best for their intended application.

Dayton Progress is a recognized leader

for manufacturing and supplying tools and accessories to the Metal Stamping and Metal Forming industries globally. Dayton's more than 800 employees ship hundreds of thousands of tools each year from its 10 factories in North America, Europe and Asia to 20,000 customers in 70 countries.

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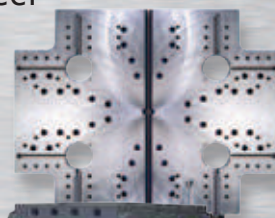
nanoceramic lubricating grease. For additional information visit them online at [www.daytonprogress.com](http://www.daytonprogress.com), or e-mail them at [info@daytonprogress.com](mailto:info@daytonprogress.com) or call (937) 859-5111. Write to Dayton Progress, 500 Progress Road, PO Box 39, Dayton, OH 45449-0039.



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# BENDON GEAR RECEIVES RAYTHEON 4 STAR SUPPLIER AWARD

Bendon Gear & Machine, Inc. (Rockland, MA) has been recognized for its outstanding quality and performance by Raytheon's Integrated Defense Systems (IDS). Raytheon conferred its 4-Star Supplier Excellence Award for 2013 to Bendon Gear & Machine, which manufactures custom and precision gears, precision components and mechanical assemblies that support various programs for Raytheon.

Raytheon honored over 180 companies from across the globe during their awards banquet which was held in conjunction with their Supplier Excellence Conference at the Westin Waltham on Wednesday, June 4th.

"We are extremely honored to have been recognized as a Raytheon 4-Star Supplier. Staff at Bendon takes great pride in the work we do to support Raytheon's customer base which includes the men and women of our U.S. Armed Forces," said Peter Belezos, President of Bendon Gear. "This award is an honor and a testament to the many individuals that make up the Bendon team," stated Doug Tressel, Vice President of Bendon Gear.

Raytheon's Integrated Defense Systems business instituted the



Robert Curbeam (VP, Mission Assurance, Raytheon), G. Peter Belezos (President, Bendon Gear & Machine), Douglas E. Tressel (VP & Engineering, Bendon Gear & Machine) and Michael Shaughnessy (VP, Integrated Supply Chain, Raytheon)

annual Supplier Excellence Awards program to recognize suppliers who have provided outstanding service and partnership exceeding customer requirements. Award candidates are judged on certain criteria, including overall quality, on time delivery and demonstrated commitment to continuous improvement. Bendon was one of the companies recognized for 4-Star honors.

Bendon Gear & Machine is located in Rockland, MA and has been in continuous operation since 1966. The company's primary manufacturing focus is in supplying small to medium sized precision machined components, mechanical assemblies,

precision gears, gear assemblies and other motion control components for the Defense, Medical and Commercial industries. Bendon is ISO 9001:2008 certified and ITAR registered and is classified as a Small Business Administration Veteran Owned company. Bendon Gear & Machine has been a member of NTMA for over 35 years, and is an active member in NTMA's Boston Chapter.



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## 2014 Fall Conference NEW ORLEANS LOUISIANA

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## NTMA Chairman's Message



Mickey and I look forward to welcoming you to New Orleans for the 2014 NTMA Fall Conference on October 22-24! We hope you will join us and more than 250 of your fellow NTMA members for this insightful event. The theme of this year's conference is "Jazz up your tools", and the three day event will include breakouts, roundtables, technology suites and exciting networking opportunities.

New Orleans has lots of great history and is a fun place to visit. The conference will feature some unique evening events to get everyone in the spirit of New Orleans. The conference will be held at the historic "The Roosevelt New Orleans." The Roosevelt is located conveniently in the

Central Business District of New Orleans, just off Canal Street and one block from the world-famous French Quarter.

For our 2014 Fall Conference, we are trying something new: this will be the first conference that will not feature keynote speakers. We will have more business tracks, a full day of technology and many more roundtables. Most member teams have elected to perform their business before the event and will hold team roundtables. There should be more time to network and get to know each other.

For NTMA members, finding value both at the local chapter and at national is important to their growth. As part of our Re-Tooling efforts, we will highlight and re-visit many of the tools of the NTMA. At our conference, you will work hard and play even harder.

This event offers a great opportunity to collaborate with NTMA peers, explore new ideas, learn about cutting edge technology, discover new initiatives for business development and learn about our industry advocacy in Washington, DC.

Mickey and I hope you mark October 22-24 on your calendar to join us in New Orleans. Your participation will help our industry ensure there is a bright future for manufacturing here in America.

A handwritten signature in black ink that reads "Ted Toth".

Ted Toth  
2014 NTMA National Chairman



# 2014 Fall Conference Schedule of Events

## Tuesday, October 21

- 2:00pm – 6:00pm Registration
- 3:00pm - 5:00pm Trustee & Chapter Leadership Roundtable
- 5:30pm – 6:30pm Trustee & Chapter Leadership Reception

## Wednesday, October 22

- 8:00am - 7:00pm Registration
- 8:00am - 9:00am Continental Breakfast
- 8:00am - 9:00am First Timers Breakfast \*Invitation Only
- 8:00am - 9:00am Chapter Executives Breakfast \*Invitation Only
- 9:00am - 11:15am NTMA General Membership Assembly/NIMS Presentation

- 11:30am - 1:15pm GAT Team Meeting Lunch  
\*Team Members Only
- 11:30am - 1:00pm NTMF Board Meeting Lunch  
\*Invitation Only
- 11:30am – 1:00pm Tech Team Roundtable Lunch  
\*First Come First Served – Limit 30 Lunches
- 11:30am – 1:00pm Chapter Executive Lunch  
\*Chapter Executives Only

- 1:30pm - 3:00pm Business Development Tracks
  - A. Lean Manufacturing
  - B. Manufacturing Metrics
  - C. Sales
  - D. Federal Regulations Impact Update

### 1:00pm - 3:30pm Optional Activity – Walking Ghost Tour

- 3:00pm – 3:30pm Break
- 3:30pm – 5:00pm Business Development Tracks
  - A. Conflict Minerals/Materials
  - B. Additive Manufacturing
  - C. NTMA-U
  - D. Export Promotion

- 6:00pm – 7:30pm Transportation
- 7:00pm - 10:00pm Kennametal Event: World War II Museum

## Thursday, October 23

### \*\*Technology Day\*\*

- 8:00am - 5:00pm Information Center
- 8:00am - 10:00am Continental Breakfast
- WOW Breakfast – **Sponsored by Mazak**
- 8:00am - 10:00am Board of Trustees Meeting w/ Breakfast
- 9:00am – 12:00pm **Spouses Program – Mask Making**
- 10:15am - 11:00am Tech Seminar 1 – **Sponsored by Big Kaiser**  
**Machine Interface Training**
- 11:15am - 12:00pm Tech Seminar 2 – **Sponsored by Mazak**  
**Tool Handling and Management**
- 12:00pm - 1:15pm Lunch/Social Media Seminar  
**Sponsored by DMG Mori**
- 1:15pm - 2:00pm Tech Seminar 3 - **Sponsored by DMG Mori**  
**Laser Tech Machine**

## Thursday, October 23 continued

- 2:15pm - 3:00pm Tech Seminar 4 - **Sponsored by Doosan**  
**Options for Shop Consumables**
- 3:00pm – 3:15pm Break
- 3:15pm - 4:00pm Tech Seminar 5 – **Sponsored by Epicor**  
**Quote Management**
- 4:15pm - 5:00pm Tech Seminar 6 - **Sponsored by Okuma**  
**What's Next in Technology?**
- 5:00pm - 6:00pm Tech Reception

## Friday, October 24

- 8:00am - 12:00pm Information Center
- 8:00am - 9:00am Continental Breakfast
- 8:00am – 9:00am Team Leaders Breakfast Roundtable  
\*Team Leaders Only
- 9:00am - 10:15am NTMA General Membership Assembly
  - The Franklin Partnership Updates
  - Team Updates
- 10:15am – 10:30am Break
- 10:30am - 12:30pm INDUSTRY SECTOR ROUND TABLES
  - Aerospace / Defense
  - Automotive
  - Fluid Power
  - Medical
  - Oil & Gas

- 12:30pm – 2:00pm Past Chairman's Lunch  
\*Invitation Only
- 12:30pm – 2:00pm Emerging Leaders Lunch  
\*Invitation Only
- 12:30pm – 2:00pm Workforce Development Round Table Lunch  
\*First Come First Served – Limit 40 Lunches
- 12:30pm – 2:00pm Lunch (on own)

### 1:30pm – 4:30pm Optional Activity – Steamboat Jazz Cruise

- 2:00pm – 4:00pm INDUSTRY ROUND TABLES
  - NTMA Tools, Dies & Molds Round Table
  - NTMA Precision Machining Round Table I
  - NTMA Precision Machining Round Table II
  - NTMA Precision Machining Round Table III
- 4:00pm – 5:00pm Member Value Round Table
- 6:00pm - 7:00pm Cocktail Hour
- 7:00pm - 10:00pm Silent Auction/Gala

### Conversation Lounge – Sponsored by GF

You're invited to catch up, meet up or just relax in the Conversation Lounge.

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The Roosevelt is located conveniently in the Central Business District of New Orleans just off Canal Street and one block from the world-famous French Quarter. The Roosevelt is just a short 20 minute drive from the Louis Armstrong New Orleans International Airport.



NTMA's group rate at The Roosevelt is \$249 (plus tax) per night and is available 10/18-10/28. To make your reservation by phone, please call 1-504-648-1200 and reference the NTMA Fall Conference to obtain the group rate. Be sure to book by September 21, 2014 to take advantage of the discounted rate.



HOTEL RESERVATION LINK:

<https://resweb.passkey.com/go/NTMAfall>



# 2014 Fall Conference Registration

First Registrant \_\_\_\_\_  
Email \_\_\_\_\_  
Spouse/Guest \_\_\_\_\_  
Children (list ages) \_\_\_\_\_  
Company \_\_\_\_\_  
Company Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
FAX \_\_\_\_\_  
Home Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
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Children (list ages) \_\_\_\_\_  
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Home Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_

**CONFERENCE REGISTRATION FEES** (per person)**STANDARD REGISTRATION—after Sept. 19th**

## MEMBERS ONLY

NTMA Member (first company attendee) \$1395 \$ \_\_\_\_\_  
NTMA Member (additional company attendees) \$1195 \$ \_\_\_\_\_  
NTMA Member Spouse \$995 \$ \_\_\_\_\_  
NTMA Chapter Executives\* No Charge \$ \_\_ NC \_\_  
Past Service Members \$995 \$ \_\_\_\_\_  
Affinity Partner \$995 \$ \_\_\_\_\_  
All persons 6 to 20 years of age not employed  
full-time by the company \$295 \$ \_\_\_\_\_

**NON-MEMBER REGISTRATION**

Non-Members \$1495 \$ \_\_\_\_\_  
Non-Member Spouse \$1095 \$ \_\_\_\_\_  
Non-Member (additional company attendees) \$1395 \$ \_\_\_\_\_

**First Time Attendees** (You have not attended a National Event in 3 Years)

\$650 by August 1st — limit 20 \$ \_\_\_\_\_

**REGISTRATION TOTAL** ..... \$ \_\_\_\_\_

**CHECK ALL THAT APPLY**

☐ First Conference ☐ Chapter President  
☐ Trustee ☐ Chapter Executive\*  
☐ Alternate Trustee  
☐ Past Service Member  
☐ Emerging Leader (formerly Next Generation)

\* Chapter Executives refers to chapter directors/executive secretaries. Does not include volunteer chapter officers, i.e., chapter president, vice president, secretary-treasurer.

**OPTIONAL EVENTS**

☐ Walking Ghost Tour (Wed, Oct. 22) \$40 p/p \$ \_\_\_\_\_  
\*limit 50 people  
☐ Spouse Activity—Mask Making (Thurs, Oct. 23) \$ \_\_ NC \_\_  
\*limit 30 people  
☐ Steamboat Jazz Cruise (Fri, Oct. 24) \$40 p/p \$ \_\_\_\_\_  
\*limit 50 people

**OPTIONAL ACTIVITY TOTAL** ..... \$ \_\_\_\_\_

**CONFERENCE REGISTRATION FEES** (per person)**EARLY BIRD DISCOUNT (ROUND 1) — before Aug. 1st**

## MEMBERS ONLY

NTMA Member (1st company attendee) \$1195 \$ \_\_\_\_\_  
NTMA Member (additional company attendees) \$750 \$ \_\_\_\_\_  
\*limited number (10) available  
NTMA Member Spouse \$895 \$ \_\_\_\_\_

**CONFERENCE REGISTRATION FEES** (per person)**EARLY BIRD DISCOUNT (ROUND 2) — Aug. 2nd to Sept. 19th**

## MEMBERS ONLY

NTMA Member (1st company attendee) \$1195 \$ \_\_\_\_\_  
NTMA Member (additional company attendees) \$995 \$ \_\_\_\_\_  
\*limited number (10) available  
NTMA Member Spouse \$895 \$ \_\_\_\_\_

**TOTAL CONFERENCE REGISTRATION TOTAL** ..... \$ \_\_\_\_\_

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*Payments to NTMA are not tax deductible as charitable contributions for federal income tax purposes. However, such payments may be deductible as business expenses.*

For questions or registration assistance, please contact Brittany Belko at [bbelko@ntma.org](mailto:bbelko@ntma.org) or 216-264-2848.



# NTMA Launches Successful Inaugural CFO Roundtable



Sponsored by BCG & Company



Larry Goddard of SS&G Parkland presented a topic on cost reduction.

Sponsored by Akron-based BCG & Company, the first-ever NTMA CFO Roundtable was an assembly of 16 like-minded folks from NTMA membership – those responsible for the numbers end of NTMA businesses. An opening dinner was followed by a full day on June 10 in Cleveland, OH.

Speakers from SS&G Financial Service; Focus CFO and Buckingham, Doolittle and Burroughs LLP offered insights and learning throughout the day, with a concluding roundtable discussion to wrap things up. Attendees discussed cash flow management, cost control strategies and

taxes with the speakers. The roundtable focused on software solutions and financial metrics, specifically those provided by the OCEC survey.

NTMA CFO Doug DeRose, who coordinated this and future CFO Roundtables said the success of this event has established it as a great model for future regionally focused conferences. In fact, preliminary plans are developing for the next CFO Roundtable, targeted for early November on the East Coast. Going forward, roundtables will have the same format, with topics that appeal to members' financial managers and owners. The plan will be to host 2-3

such regional conferences throughout the United States. NTMA is working toward the goal of this conference offering continuing education credit that can be applied for professional certification requirements.

For those interested in the November conference – now would be a good time to contact Doug with ideas about topics and/or dynamic speakers who might bring real value to attendees. He can be reached at [dderose@ntma.org](mailto:dderose@ntma.org) or (216) 264-2829.



## MAPI ECONOMIC FORECAST: INVESTMENT SPENDING WILL DRIVE GROWTH

BY THE MANUFACTURERS ALLIANCE FOR PRODUCTIVITY AND INNOVATION

Manufacturing production continues to outpace overall economic growth and will be led more by investment than by consumer-driven advances over the next 18 months, according to a new report.

The Manufacturers Alliance for Productivity and Innovation (MAPI) Quarterly Economic Forecast predicts that inflation-adjusted gross domestic product will expand 2.5

percent in 2014 and 3.2 percent in 2015. The former is a decrease from 2.8 percent and the latter equal to the 3.2 percent from MAPI's March 2014 report.

Manufacturing production is expected to fare better, with anticipated growth of 3.2 percent in 2014 and 4.0 percent in 2015, consistent with the previous report.

"While consumer-driven manu-

Economic Indicators	Percent Change or Level as Specified		
	2013	2014(F)	2015(F)
<b>Prices (% change)</b>			
Consumer Prices	1.5	1.9	1.8
Excl. Food & Energy	1.8	1.8	1.9
Producer Prices, Finished Goods	1.2	2.7	0.9
<b>Energy (\$)</b>			
Imported Crude Oil (\$ per barrel)	\$98.0	\$95.9	\$93.6
Natural Gas Henry Hub Price (\$/mmbtu)	\$3.7	\$4.8	\$4.5
<b>Other Key Measures</b>			
Nonfarm Inventory Change (Billion 2009\$)	\$58	\$65	\$51
Light Vehicle Sales (Million units)	15.5	16.1	16.3
Housing Starts (Million units)	0.029	1.026	1.464
Federal Surplus (NIPA, Billion \$)	-6.32	-6.65	-6.63
Current Account Balance (Billion \$)	-83.9	-83.8	-83.0
<b>Labor</b>			
Unemployment Rate (%)	7.4	6.4	5.9
Payroll Employment (% change)	1.7	1.8	2.0
<b>Production (% change)</b>			
Manufacturing (SIC Basis)	2.6	3.2	4.0
Computers & Electronic Products	7.0	6.6	10.0



facturing will grow at a consistently moderate rate, the industries driven by investment will grow at a higher rate,” predicted MAPI Chief Economist Daniel J. Meckstroth, Ph.D. “Energy infrastructure and manufacturing machinery will see increases as firms replace and expand equipment. Aerospace will also experience a big ramp-up in production. In addition, there will be growth in the construction supply chain—HVAC, wood, paint, appliances, and furniture—as we anticipate both residential and nonresidential increases. The acceleration driver will be investment.”

Production in non-high-tech manufacturing industries is expected to increase 2.9 percent in 2014 and 3.7 percent in 2015. High-tech manufacturing production, which accounts for approximately 5 percent of all manufacturing, is anticipated to grow 6.6 percent in 2014 and 10.0 percent in 2015.

The forecast for inflation-adjusted investment in equipment is for growth of 5.2 percent in 2014 and 10.3 percent in 2015. Capital equipment spending in high-tech sectors will also rise. Inflation-adjusted expenditures for information processing equipment are anticipated to increase 2.7 percent in 2014 and a strong 14.6 percent in 2015.

MAPI expects industrial equipment ex-

penditures to advance 8.1 percent in 2014 and 10.8 percent in 2015. The outlook for spending on transportation equipment is for growth of 5.6 percent in 2014 and 3.9 percent in 2015. Spending on nonresidential structures is anticipated to improve by 4.2 percent in 2014 and by 5.1 percent in 2015. Residential fixed investment is forecast to increase by 4.1 percent this year and a robust 19.9 percent in 2015.

“We anticipate 1.03 million housing starts in 2014 and 1.40 million starts in 2015,” Meckstroth said. “Manufacturing production will finally approach its 2008-2009 pre-recession peak by the end of 2014.”

Inflation-adjusted exports are anticipated to increase 3.0 percent in 2014 and 5.1 percent in 2015. Imports are expected to grow 2.1 percent in 2014 and 6.8 percent in 2015. MAPI forecasts overall unemployment to average 6.4 percent in 2014 and drop to 5.9 percent in 2015.

MAPI Economic Forecast			
GDP Expenditure Categories	Inflation-Adjusted Percent Change		
	2013	2014(F)	2015(F)
Gross Domestic Product	1.9	2.5	3.2
Total Consumption	2.0	2.7	3.1
Durables	6.9	5.1	6.3
Nondurables	2.0	2.0	2.9
Services	1.2	2.6	2.7
Nonresidential Fixed Investment	2.7	4.4	7.4
Equipment	3.1	5.2	10.3
Information Processing Equipment	3.4	2.7	14.6
Industrial Equipment	3.3	8.1	10.8
Transportation Equipment	0.4	5.6	3.9
Intellectual Property Products	3.1	3.4	5.0
Structures	1.3	4.2	5.1
Residential Fixed Investment	12.2	4.1	19.9
Exports	2.7	3.0	5.1
Imports	1.4	2.1	6.8
Federal Government	-5.2	-2.4	-0.5
State & Local Government	-0.2	0.3	1.0
F=Forecast			
Source(s) MAPI May 2014			

The outlook is for an increase of 158,000 manufacturing jobs in 2014, a decline from the anticipated 356,000 jobs in the March forecast, but increasing to 212,000 jobs in 2015, an increase from 197,000 jobs in the previous report.

The refiners’ acquisition cost per barrel of imported crude oil is expected to average \$95.90 in 2014 and \$93.60 in 2015.



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# MANUFACTURING: A NEW COMMERCE DEPARTMENT REPORT SHOWS RENEWED EXPANSION

BY DR. SUE HELPER, CHIEF ECONOMIST, U.S. DEPARTMENT OF COMMERCE

The U.S. manufacturing sector is rebounding at a rate unseen since the late 1990s. For the first time in more than a decade, output and employment are steadily and simultaneously increasing. A new Commerce Department report, *Manufacturing Since the Great Recession*, provides an overview of the resurgence of this important economic sector, examining production, international trade and the labor market.

## SOME OF THE KEY FINDINGS INCLUDED IN THE REPORT ARE:

- Manufacturing output has grown 38 percent since the second quarter of 2009 when the Great Recession ended, and accounts for 19 percent of the rise in real gross domestic product (GDP) since that time;
- From March 2010 through May 2014, the manufacturing sector has added 646,000 jobs with an additional 243,000 positions yet to be filled. This is more than a cyclical rebound; the US has gained about four times as many manufacturing jobs since 2009 as would be expected from cyclical factors alone; and,
- In 2013, average annual weekly hours for production workers in the manufacturing sector were at their highest level since the mid-1940s.

Manufacturing jobs are good jobs: workers earn 16 percent more in manufacturing jobs (in combined wages and benefits) than they would elsewhere. Not surprisingly, quit rates are also lower than in any non-government sector.

It should be noted that manufacturing continues to face significant challenges. The large and growing foreign trade deficit is a substantial issue. Additionally, gains in manufacturing job growth are small compared with the total number lost during the last decade. To overcome these obstacles, the Obama Administration is committed to a number of initiatives to expand manufacturing in the U.S. One example of this is the National Network for Manufacturing Innovation (NNMI). The basic idea behind NNMI is to create “innovation ecosystems,” around the country. These regional centers for industry and academia—from large companies to their smallest suppliers, from major research institutions to community colleges—work together to make technological breakthroughs that will benefit a region’s manufacturing base, rather than just a single company.

Here at the Commerce Department, we are also doing our part to ensure continued growth of this critical sector. On May 28th, 2014, Commerce Secretary Penny Pritzker

announced the first 12 “Manufacturing Communities” as part of a multi-agency designation led by the Commerce Department, through a new program called the Investing in Manufacturing Community Partnership (IMCP). IMCP aims to accelerate the resurgence of manufacturing in American communities by encouraging them to create long-term economic development strategies that strengthen manufacturing eco-systems.

Moreover, President Obama has made encouraging insourcing and investment in the U.S. from both domestic and foreign-domiciled firms, a key pillar of his overall manufacturing agenda.

Last summer, Former National Economic Council Director Gene Sperling characterized this expansion as a “manufacturing renaissance.” Today’s report highlights broad evidence that the renaissance continues to unfold. Gains in production and jobs that might have seemed wishful thinking just a few years ago have now come to fruition.



## BOSTON CENTERLESS OPENS THIRD DISTRIBUTION CENTER ON THE WEST COAST

Boston Centerless has opened a third distribution center located in Nevada to better service customers on the West Coast. The new warehouse located in Sparks, just outside of Reno, will provide customers in the western part of the country with materials that are specifically produced for CNC Swiss screw machining applications. The Sparks location will decrease delivery time to these customers by as much as 70%. Materials stocked will include various sizes and grades of AccuRod.0002TM precision ground bar product and Carpenter’s Project 70®+ PDB® stainless steel. They will be available for immediate delivery to

the surrounding states. Both products offer the benefits of precision ground bar without the wait of custom grinding.

In addition to AccuRod.0002 and Project 70+ PDB, Boston Centerless will also stock nominal sizes of 17-4 and 17-4 PH900 stainless as well as Ti 6AL4V ELI titanium and other medical grade alloys.

The Sparks facility is the third distribution center to be opened by Boston Centerless in the past year to help fuel their continued growth. “Having a presence on the West Coast will greatly benefit our customers in that area, enabling us to get product to them much faster,” said Steven

Tamasi, CEO of Boston Centerless. “It will also help attract customers that felt distance was a barrier to doing business with us previously.” The two other distribution centers are located in Minnesota and New England.

Boston Centerless supplies customers worldwide with precision ground bar materials for close tolerance machining applications. The company also provides grinding services for customer-supplied material and components and manufactures a line of ultra-precise gages. For more information, visit [www.bostoncenterless.com](http://www.bostoncenterless.com)





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# Washington Regulators Look Skyward



Frustrated by Congressional inaction on climate change, the Administration decided to launch an effort this month through the Environmental Protection Agency (EPA) to limit “greenhouse gas emissions” from existing coal-fired power plants. The EPA’s proposed regulation seeks to cut carbon dioxide emissions from plants by 30 percent from 2005 levels – when emission levels were at their peak – by 2030. The administration is billing the effort as flexible, far-reaching and even a money-saver for American citizens.

How flexible is the rule likely to be? The rule aims to allow states to cut emissions 30% by relying on creative solutions, including enhanced energy efficiency, shifting from coal plants to natural gas (something that is already underway in the power sector), investing in renewables, and making upgrades to existing plants. Ultimately, however, flexibility is in the eye of the beholder – and the beholder in this case is the EPA itself, which gets to approve the finer points of actions states will take to comply. Time will tell how it administers the plan.

As to the costs of implementing the rule, the EPA claims that, for every \$1 Americans spend to implement the initiative, Americans will gain \$7 in health benefits. Critics have noted, however, that the health benefits that EPA refers to relate to reductions in traditional air pollutants (basically soot) that would occur in tandem with reductions of the targeted CO2 emissions. Yet those traditional pollutants are already closely monitored and on the decline under existing clean air regulations.

The proposal is likely to result in a number of lost coal-sector jobs over time. It could also ratchet up the cost of electricity in some states, depending upon a state’s rate of transition to natural gas-fired plants, access to viable alternative energy fuels, and ability to implement those efficiency measures. The specific reduction goals for each state vary depending upon those factors.

Will the initiative ultimately raise electricity costs – a major concern for NTMA member companies’ energy intensive businesses? As they like to say in Washington, it depends. In the end, by circumventing Congress, the Administration has come up with a plan based just on a rule, which will almost certainly be challenged in court when it’s finalized next year, and can always be overturned by future administrations. So stay tuned.

Manufacturers can make a difference in Washington, but only if they participate in the process. NTMA members can give unlimited corporate or individual contributions to the NTMA Government Affairs Administrative Fund which supports the work done by The Franklin Partnership and Policy Resolution Group at Bracewell & Giuliani LLP. Additionally, NTMA members can make limited personal donations to the Committee for a Strong Economy (CFASE) PAC, which supports pro-manufacturing Congressional candidates.



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Registration information coming soon!

## FREE AJAH GUIDE FOR FEDERAL CONTRACTORS ON NEW OFCCP VETERAN HIRING COMPLIANCE REQUIREMENTS

American Jobs for America's Heroes (AJAH), a non-profit veterans hiring campaign, has published a free "business English" summary guide to the new OFCCP VEVRAA regulations requiring that 7.2% of new federal contractor hires are "protected veterans". (This percentage will be updated annually by OFCCP.)

If a company has at least one federal contract with a value of \$100,000 or more, then the company is subject to new regulations issued under the Vietnam Era Veterans' Rehabilitation Assistance Act (VEVRAA) that went into effect on March 24, 2014.

This free AJAH Guide distills 60 pages of confusing regulations into an easy-to-follow guide for meeting VEVRAA requirements. You can download it here: <http://www.CenterForAmerica.org/ofccp.html>

"Businesses that capitalize on the employment of veterans are investing in long-term stability and proven reputations. They are investing in a network of extraordinary individuals with the training, experience and values every business is searching for. Let's invest in the future of our nation by connecting business with veterans," said U.S. Sen. Joe Manchin (D-WV), who authored the Foreword for the Guide. "The American Jobs for America's Heroes campaign is an effective resource to help businesses accomplish this goal."

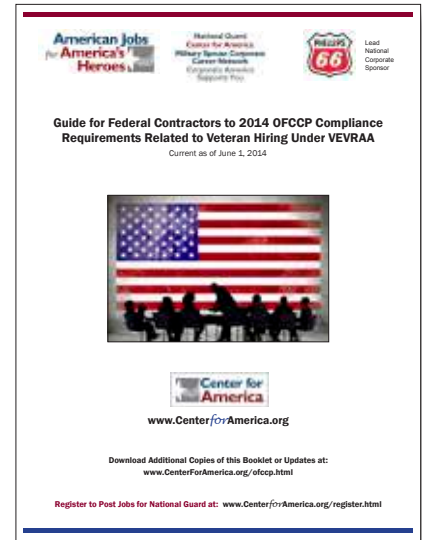
"The new VEVRAA regulations require contractors to act on two primary strategies. The first is a requirement that they strengthen their companywide internal recruiting methods to ensure they are effective and appropriately resourced to identify, interview and recruit 'protected veterans,'" said Bob Mignin and Celina Joachim of Baker & McKenzie, the lawyers who authored the Guide. "The second strategy is to expand the contractors' outreach to connect with the

tremendous network of government and nonprofit organizations who can help with matching employers with veteran candidates."

The AJAH campaign enables employers to post jobs at no cost that are provided directly to military employment counselors in the National Guard and other military branches. These counselors are working one-on-one with military candidates to match them with postings. All services are free. You can register to participate in five minutes at <http://www.CenterForAmerica.org>, where you can access many free educational videos, booklets and webinar replays.

More than 1,150 employers are already participating. Phillips 66 is the lead national corporate sponsor of the AJAH campaign.

Questions? Contact: Steve Nowlan, Center for America, 201-513-0379 or [SNowlan@CenterForAmerica.org](mailto:SNowlan@CenterForAmerica.org).



## BRIGADIER GENERAL KENNETH BEARD WEBINAR EXCERPT RECORDING

Ken Beard, Assistant Adjutant General for the North Carolina National Guard was a guest speaker on a webinar recently conducted by the Center of America for employers wanting to hire veterans. You can watch an 18-minute webinar excerpt in which he explains how the National Guard is helping members get the civilian training and credentials they need to qualify for civilian jobs. This is an unusual opportunity to hear directly from Guard leadership on how the Guard is helping employ-



ers directly and through the American Jobs for America's Heroes campaign.

To access the recording go to [www.CenterForAmerica.org/beard.html](http://www.CenterForAmerica.org/beard.html)



## SURVEY: GROWTH TO PICK UP, HIRING TO REMAIN STEADY

WASHINGTON (AP) — U.S. economic growth should accelerate in the second quarter and remain healthy for the rest of this year, according to a forecast by a group of U.S. business economists. Still, growth for the full year will likely come in lower than they previously estimated.

Job growth should remain steady and consumer spending will also likely pick up, an early June survey by the National Association of Business Economists. The survey of 47 economists from companies, trade associations and academia was conducted from May 8 to May 21.

The survey also found that economists increasingly agree that the Federal Reserve will end its bond purchase program by the end of this year.

That's partly because economists are optimistic about growth for the rest of this year. They expect it will jump to 3.5 percent in the second quarter and remain above 3 percent for the rest of the year.

But the pickup comes after harsh winter weather caused the nation's gross domestic product to contract 1 percent in the first three months of the year, much worse than analysts had expected. GDP is the broadest

CONTINUED ON — P27



measure of an economy's output.

That weak first quarter reading has caused many economists to lower their expectations for 2014 as a whole. The NABE survey found that economists now project growth will be just 2.5 percent this year, down from a forecast of 2.8 percent in March.

The new forecast is still slightly above the annual average growth rate of about 2.2 percent since the recession ended in June 2009 and up from 1.9 percent in 2013. But stronger growth is needed to accelerate hiring and boost wage growth, which has been weak by historical standards.

The NABE's survey is slightly more pessimistic than the Federal Reserve's most recent projections, released in March. The Fed expects growth will be between 2.8 percent and 3 percent this year. The Fed may lower its growth outlook for this year when it releases its next forecasts later this month because of the first quarter's contraction.

Economists are nearing a consensus about the timing of the Federal Reserve's next moves. Nearly three-quarters expect the Fed will end its bond purchase program in the final three months of this year, the NABE survey found. That's up from the 57 percent who said so three months ago.

## ARE YOU A WISE GENERAL?

AWARD-WINNING CEO SHARES TIPS FOR BEING A  
21ST CENTURY LEADER  
CORRINE SANDLER

The wise general understands that to fight and win all of your battles is not supreme excellence. Supreme excellence, rather, is breaking the enemy's resistance without fighting.

Business leadership in the past was dominated by managers who ruled from the top down; organizational hierarchies were structured along military lines and people climbed the ranks. But today's wise general needs to be like Sun Tzu, the ancient philosopher who went on to become one of history's greatest military commanders.

Twenty-first century leaders are reshaping the best-led global companies. Authentic leaders need to be focused on customers and not on serving short-term shareholders.

If you are a wise general you will come to work to empower your colleagues and your customers. I have a famous saying: "I come to work each day to delight my customers; the result is I make money."

In the 21st century the most successful leaders focus on creating superior performance by aligning people around a corporate culture and living and breathing that culture while concentrating on wowing customers. In my book, "Wake Up or Die," ([www.wakeupordie.us](http://www.wakeupordie.us)), a comprehensive guide to the use of intelligence in the contemporary business environment, I talk about one of the most important traits for a wise general or leader today: emotional intelligence.

Managing and directing employees involves a great understanding and application of emotional intelligence, which leaders, wise generals and CEOs too often simply ignore or don't understand.

As a leader deploying your troops, you've got to engage them in your vision, connect with them, and assure cohesiveness among them.

The good news is that this distinguishing feature of your personal nature can be strengthened over time. Through experience I have learned the importance of acquiring and using emotional intelligence because of its impact on business success.

Emotional intelligence (EI) – or in casual shorthand, EQ (emo-

The Fed is purchasing Treasury securities and mortgage-backed bonds in an effort to lower long-term interest rates to encourage more borrowing and spending. It has been steadily paring back the program, from \$85 billion a month last year to \$45 billion in May.

In addition, 86 percent of economists forecast that the Fed will raise the benchmark short-term interest rate it controls for the first time in 2015. In March, just 53 percent said 2015, while one-third said this year and 15 percent said a rate hike wouldn't occur until 2016.

The NABE survey found that the economists are more optimistic about hiring. They project that employers will add 209,000 jobs a month this year. That's up from their March forecast of 188,000.

So far this year, hiring has been a little bit better: it has averaged 214,000 a month from January through May.

More jobs means more people earning paychecks, and that can boost spending. Economists are more optimistic about consumer spending this year, which they estimate will grow at a 2.9 percent pace. That would be the highest level since 2006.



tional quotient) – helps define both incoming and outgoing behaviors, either of which can be detrimental to simple relations like customer service and co-worker partnerships. The biggest surprise for me has been the impact of EI in the world of business, particularly in the areas of leadership and employee development.

The Harvard Business Review has hailed emotional intelligence as "a ground-breaking, paradigm-shattering idea," one of the most influential business ideas of the decade. I believe EI to be so vital to the success of any organization that I have devoted an entire chapter in my book to it.

A leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say: we did it ourselves. —Lao Tzu

### ABOUT CORRINE SANDLER

Corrine Sandler is the founder and CEO of Fresh Intelligence Research Corp, a global market research agency; international professional speaker and author of "Wake Up or Die," ([www.wakeupordie.us](http://www.wakeupordie.us)) a new book that applies lessons from Sun Tzu's ancient classic, "The Art of War," to contemporary businesses. Corrine has been on Profit's top 100 Female Entrepreneurs list two years in a row. With more than 20 years' experience, she has established a reputation for unparalleled consumer understanding and insight development working with Fortune 500 companies.





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# To 3D, or not to 3D?

BY REID LELAND PE

PRESIDENT OF LEANWERKS AND  
NTMA TECHNOLOGY TEAM LEADER

Are you wondering how additive manufacturing (AM) is restructuring supply chains, or whether or not to add a 3D printer to your shop? I am – so I went to SME's Rapid (June 9 – 12, 2014, Detroit, MI), the leading conference and trade show on the state of the science and application of AM. I encourage you to read the feature article, "3D Printing Builds Up its Manufacturing Resume" in the June edition of SME's Manufacturing Engineering



magazine for a comprehensive overview of the state of the industry. My take-aways from Rapid are presented in the following.

Over the past three years, AM has received much attention from the media including features in The Wall Street Journal, television networks, and the 2012 "Print Me a Stradivarius" exposé in the Economist. This coverage has increased awareness in the general public, generated a loud buzz around the universe of manufacturing, and exuberance in the investment community. The buzz is not without warrant – AM is making real progress – Most notably, the much talked about 3D printed fuel nozzle for GE's LEAP jet engine that was redesigned to take advantage of the capabilities

of AM. The redesigned nozzle is now one component in place of an 18 piece assembly, works with improved performance, is lighter, and the impetus for GE's "My mom print's airplanes..." commercial.

There is a broad variety of 3D printers. They use vastly different technologies, each optimized for a subset of materials and applications, and by my survey they range from \$150 for a simple desktop plastic printing machine to several million for a high resolution high power metal printing machine.

The uncertainties surrounding surface porosity, density, and microstructure of metal AM have all but disappeared. Metal printers are producing parts with mechanical properties that approach those of their wrought subtractive counterpart – and in some cases better. With heat treating and hot isostatic pressing, stresses can be relieved and specific material properties can be targeted and achieved.

Hybrid metal additive/subtractive machines are here. Matsuura already has a powder bed laser sintering hybrid milling machine targeted towards mold makers. It facilitates faster mold production and mold design improvements not manufacturable with traditional milling. DMG Mori is ramping up to introduce a powder jet laser sintering hybrid 5-axis milling machine. The target market for this machine is less specific but clearly has application in complex geometry, expensive material, and repair markets.

DFM (design for manufacturability) will give way to DFAM (design for additive manufacturing). With AM comes the ability to create previously unmanufactur-

able geometries like internal conformal cooling channels, internal lattice and honeycomb structures, and overhanging features. Furthermore, design analysis can now be aimed at material optimization given this new less constrained design environment. Wild new shapes, component consolidation, decreased weight, and improved performance will result. All this is pushing CAD/CAM manufacturers to integrate new capabilities into their systems so designers can take full advantage of this freer design reality.

Some of the hype and irrational exuberance surrounding AM has been caused by media coverage that talks about advanced 3D printing of prosthetic body parts in the same paragraph that they describe the democratization of manufacturing based on cheap ubiquitous desktop 3D printers. We are a long way from home printing our own replacement body parts – but we can home print our own figurines and drawer knobs...

3D printed parts do not come off the printer ready for use. Nearly all require some degree of post processing. Plastic parts may need trimming, removal of support structure, sanding, or painting. Metal parts may need removal of support structure, stress relieving, heat treating, hot isostatic pressing, surface treatments, or deburring.

With this new advent of manufacturing capability, comes the need for new standards. ASTM/F42 and ISO are developing and have released standards related to four specific AM areas: 1) Materials and Processes 2) Testing 3) Data/Design/File Format 4) Terminology.

If you make a living building prototypes and tooling using



traditional fabrication and machining technologies – your days may be numbered. The patent on selective laser sintering (SLS) expires this week and several are lined up to jump in with their offering for a metal 3D printer based on that technology. It will take longer for the prices to come down on these metal printers than it did for the plastic printers. When prices hit the threshold that makes them accessible to large and medium sized design firms, OEMs, and contract manufacturers, many small lot, prototype, and tooling jobs will vanish.

The speed capability of AM is doubling about every 18 months. You don't have to look too far into the future to see a vastly different and enhanced manufacturing reality. One keynote speaker said, "We tend to overestimate the amount of change that will occur over the next two years, but underestimate the change that will occur over the next ten."

The conference was a nice mixture of highly technical white paper presentations, panel discussions on everything from industry M&A to material selection design consideration, informative and entertaining key note speakers, and a comprehensive exposition floor with exhibitors from around the world. I encourage those who are interested or may be impacted by this game changing industry to attend the next Rapid in 2015 on May 18-21 at the Long Beach Convention Center, Long Beach, CA.







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OH Member



ST. LOUIS  
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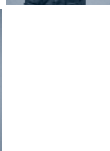
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25

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