

THE RECORD

Published by the National Tooling and Machining Association

INSIDE THIS ISSUE

What Does CMMC Mean
for You? – pp 22-25

Certifications And Compliance:
Keys for the Future – pp 28-29

and so much more ...

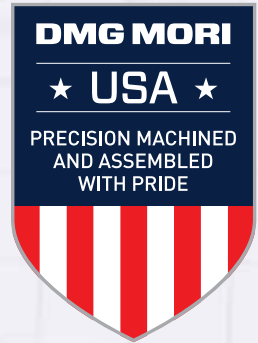
CERTIFICATIONS &
COMPLIANCE

KEYS FOR YOUR FUTURE



NHX with Linear Pallet Pool

HIGH-PRECISION, HIGH-SPEED HORIZONTAL MACHINING WITH FLEXIBLE PALLET AUTOMATION



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THE RECORD

OPERATIONS & EDITORIAL

Roger Atkins, President
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ADVERTISING INQUIRIES

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

DESIGN & LAYOUT

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Upcoming NTMA National Events

PRECISION MANUFACTURING **ENGAGE** SUMMIT EAST 2022 POWERED BY NTMA

Engage Summit East

Monday, June 6 – Wednesday, June 8
Philadelphia, PA



Emerging Leaders Conference

Monday, August 29 – Wednesday, August 31
Indianapolis, IN

THE PRECISION MANUFACTURING CONFERENCE **ENGAGE** 2022 POWERED BY NTMA

Manufacturing Engage 2022

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

What's Your Story?

Send Us Your Story

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

Contact Carrie Marsico at cmarsico@ntma.org

Upcoming Themes for The Record

May

Advocacy ... Pay or Play?

June

Industry 4.0 ... Does it Start With Your ERP System?



PRESIDENT'S UPDATE

As you receive this edition of The Record, we will all be closing the books on the first quarter of the year. Amazing that a quarter is already gone! From all indications from our NTMA Business Condition Survey, our membership as a whole is doing very well. I'm proud to say that we at the National Office are also doing well – we closed the books on last year, and, for the third year running, finished with a positive financial performance. Topping that off with a net retention rate of 96%, we say **THANK YOU** to all NTMA members for your faithfulness to support the association and our industry.

This year, we are focused on growing the association; not just for growth's sake, but, more importantly to increase our combined influence in the industry, which is vital to our personal well-being, and to our nation's dependence on our industry. We need your help to grow the association and are again asking for your participation. Just call or write some local, friendly competitors to be a part of the NTMA community – explaining NTMA's support of shops both at the local or chapter level and the national level. It's only by joining together that we can truly influence our national leaders as to the importance that small-to-medium size manufacturers have on our nation's employment, economy, and in solving the current supply chain disruptions.

Joining together can help build the legacy we leave to this industry when we pass it on to the next generation. Our responsibility is **NOW** – let's **GROW** our association community. This month's Record focus is on "Certifications/Compliance: Keys for the Future." I guess the first question is, do you believe the tag line "Keys for the Future?" Early in my career, certifications were few and far between, and were not dependent on being an approved supplier. Over the years, a certification called ISO 9000 came out, and it eventually started to become a desired certification (if not a required one) by our customers. I vividly remember we were a 150-person, 50-year-old

company and we thought: "How could a certification help us?" It's both funny and embarrassing to look back on our short-sightedness at the time. What we learned through this is that as a company we had all 50 years of processes and procedures in our heads – and without any one of us, the information would be lost. When we completed our ISO 9000 certification, we had half a century of processes documented for the next generation of our company's employees. Our ISO process was "Say What You Do and Do What You Say."

As certifications began to be required in our industry, not all companies nor customers bought in. As small-to-medium size contract manufacturers, we were not, and to some degree are still not, early adopters of change. Many continued to operate without meeting such criteria – but through the years the industry progressed, and certifications continued, and today are in continued demand.

So back to the question: are "**Certifications/Compliance: Keys for the Future?**" I would answer with a resounding **YES**. These requirements, while difficult to implement in your company and at times even harder to follow, have driven us as an industry of to be better; and, they have driven our customers to be better. At times are these requirements a little onerous? **YES**; but at the end of the day, we are better. Industry-specific certifications and compliance regulations are now the norms, for manufacturers. You might say that you have never had a certification and have done just fine. The reality is, that may very well be true for the niche market you serve **today**, but I am just not sure that answer will be appropriate for the market you serve **tomorrow**. I believe certification and compliance requirements have played a key role in raising the value and performance of the small-to-medium size precision manufacturing community.

Many in our industry serving the Department of Defense (DOD) sector now find themselves being asked to raise the bar even higher. As a result of the changes

in the global community and of world powers, coupled with the massive use of electronic communications, "**security**" has become the challenge of the day. In the world many in our industry and many of our OEM/DOD customers now participate, the ability to protect vital design and performance information has brought new certification and compliance regulations to the forefront – better known to many as **CMMC**.

The short version is that CMMC has been and is being developed to assure that information between customers and suppliers, and suppliers to customers is protected from cyber theft. CMMC, while still being fine-tuned, will require companies to change their processes and procedures. If you are involved in the DOD market, you must be diligent in knowing and strategizing how to get CMMC implemented in your company. Yes, it is your choice as to whether to continue serving this industry sector – and therefore, also a choice of being required to implement such new requirements – or not. My personal opinion is that, considering the competition in global markets and the challenges among world powers, new regulations like CMMC will be here to stay. Not only do I believe they are here to stay, but I firmly believe that once the DOD settles out the requirements on CMMC, you will see other critical industries adopt such requirements and protection for their vital industry products.

Back to the question, "Keys to the Future?" I say **YES**. Regardless of where you are on the journey, certifications and compliance will continue, and I encourage you to start or continue your path. Your company will be better, our industry will be stronger, and US manufacturing will continue to strive.

Remember, "There Is Strength in Numbers."

Roger Atkins, President – NTMA



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(Center drill .500 holes -A0)
N9520M6
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N9535G54X-4.8Y-2.
N9540G43H421.M8
N9550G98G81Z-2.77R-2.42F100.
N9560X0.Y-2.
N9570X4.8753Y-2.
N9580Y2.
N9590X0.Y2.
N9600X-4.8Y2.
N9610X0.Y0.Z-2.02R-1.67
N9620G80
N9630M5
N9640G49G91G28Z0.M9
N9650G28X0.Y0.A0.
N9660M01
(TOOL - 5 DIA. OFF. - 5 LEN.
(Drill .500 holes -A0)
N9670M6
N9675T6
N9680G0G90A0.S5000M3
N9685G54X-4.8Y-2.
N9690G43H521.M8
N9700G98G81Z-3.3R-2.42F60.
N9710X0.Y-2.
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Advertising

Member Communications

Marketing

NTMA ANNOUNCES NEW ADVERTISING PARTNER – THE ASSOCIATION PARTNER!

The National Tooling & Machining Association (NTMA) would like to announce that we will be ending our partnership with our long-term digital advertising vendor, MultiView, effective 5/31/2022. We are excited to announce that we have partnered with The Association Partner, who will represent NTMA as our official partner for advertising and sponsorship opportunities.

In addition to providing new and innovative offerings, The Association Partner will be replacing MultiView to represent NTMA for advertising opportunities

in the weekly eNewsletter, the Manufacturing Suppliers Guide, NTMA's Website advertising, and all programmatic advertising associated with NTMA.

The Association Partner takes a unique approach to promoting NTMA's most important initiatives while creating a strong relationship between top industry suppliers and NTMA members. NTMA advertisers can have 100% confidence that these opportunities will make a significant impact, while also supporting NTMA's goal of educating our members and the entire tooling and machining industry!

Please pass along this announcement to those involved in marketing and advertising within your organization as well as any others who may be involved with NTMA in the future.

Contact Case Aldridge, Director of Business Development for The Association Partner, at case@theassociationpartner.com or at (904) 686-8360 to coordinate a time to get involved!

We are excited for this new chapter ahead, thank you for your support of NTMA!

One Voice: Federal Government Advocacy Program

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

With regulations, policy, and shop safety all constantly evolving, One Voice has a wealth of fantastic resources, developed to help keep your shop informed and prepared for whatever comes next. In addition to ongoing COVID-19 response information – in line with any and all changes

that our industry may need to know – the team at One Voice also provides informative policy webinars, news releases, educational materials, video recaps, and much more.

Don't forget about the Talking With One Voice podcast – every episode, the One Voice advocacy team breaks down how the latest news from Washington impacts manufacturing businesses across the country. It's yet another way your shop can get quick, concise information on everything from tax development to loans and even workforce development issues. You can send in your key questions to be answered by emailing onevoice@policyres.com.

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

Please visit www.metalworkingadvocate.org for more information.

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

Your source for trustworthy information.

- Keep your workplace safe
- Find resources for workers
- Get tax and loan information
- Stay on top of government directives

A JOINT EFFORT BY NTMA AND FMA

NEW MEMBER HIGHLIGHTS

NTMA WELCOMES ITS NEWEST NATIONAL ASSOCIATE MEMBER: DATANOMIX

Datanomix

National Associate Member



Datanomix provides real-time production monitoring and performance analytics for CNC machines, without the need for operator inputs or links to ERP systems. The system connects to CNC machines or machine sensors and automatically analyzes the data in real-time, creating benchmarks for every single job run on every machine. Easy-to-understand production scores based on the benchmarks are displayed on smart TVs around the factory floor so everyone is on the same page, allowing manufacturers to send their best people to the jobs that need attention right now.

The Datanomix platform securely saves and analyzes all the data from every job over time, providing an in-depth understanding of long-term trends to help factory leadership make better-informed decisions around job quoting, capital expenditures, and personnel. Their customers think of Datanomix as a virtual window into their factory floor.

Looking for more information?

NTMA members can visit the Datanomix website, schedule a demo, and learn more about the Datanomix platform at: www.datanomix.io

At NTMA, We're Social. Follow Us!



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www.youtube.com/channel/UCWz78MHNBXqkxAHKqbUARzg

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Western Lake Erie Chapter Member



Rolled Alloys was founded on the introduction of wrought RA330 alloy as a replacement for cast HT alloy in the commercial heat treat industry. Over the past 60+ years, the company has enjoyed continuous growth through the expansion of alloys offered, markets served, customer base, geographic growth, and acquisitions. All U.S. locations export products around the world, and our products are also available through Rolled Alloys divisions in Canada, Singapore, and China. NeoNickel is the exclusive representative of Rolled Alloys in Europe. We have 8 locations within the US that include headquarters in Temperance, MI along with sites in Cincinnati, OH; Streamwood, IL; Windsor, CT; Richburg, SC; Hawthorne, LA; Tulsa, OK; Houston, TX. While we serve the following industries: Aerospace, Chemical Processing, Defense, Desalination, Firearms Production, Infrastructure, Medical, Oil and Gas, Pharmaceuticals, Power Generation, Thermal Processing, and Water Treatment.

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Western At-Large Member



Rapid Precision Manufacturing, Inc. (RPM) is celebrating 25 years in the business of offering quality precision machining services, having commenced operations on South Main Street in Britton, SD in 1997. RPM remains a privately held, first-generation, owned company of less than 50 employees. RPM, ISO 9001 certified since 2003, provides specialized services and design for manufacturability input throughout the developmental process, from prototype to pre-production to high volume production. RPM has made multi-million-dollar investments in Haas, Citizen, and Hanwha CNC turning, Swiss turning, and milling equipment. RPM offers contract precision machining and assembly services of a variety of metals and plastics manufactured to the specifications of a variety of customers in numerous industries from coast to coast in the United States.

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GLOBAL SHOP SOLUTIONS GOES GREEN WITH NEW SOLAR PANELS

Global Shop Solutions, a leading producer of ERP software for manufacturers around the globe, has a reputation for doing the right thing for its employees and clients. Now they're doing the right thing for the planet by switching to solar power for the company's electricity needs.

Meeting Global Shop Solutions' energy needs required enough solar panels to cover the rooftops of all three buildings at their headquarters in The Woodlands, Texas. The project took six months to complete, and will generate more than enough electricity to power the entire campus for 30 years while providing significant cost savings.

"Based on the energy we use at headquarters, it will take about seven years for the solar panels to pay for themselves," says Erika Klein, VP of R&D for Global Shop Solutions. "After that, they will generate 'free' electricity for the next 23 years, so it ends up being a good investment for us and the planet. The system will produce more electricity than we need, so we're considering installing charging stations for employees to charge their electric vehicles at work."

Up Next: Reducing the Carbon Footprint

The transformation to solar energy is the first project implemented by the company's "Green Team." Led by Klein, the team consists of a dozen employee volunteers working together to make the company more environmentally friendly. Their biggest goal for 2022 consists of finding ways to reduce Global Shop Solutions' carbon footprint.

The company's sales force, consultants, and implementation teams incur significant travel time in the air and on the road. So the first step consists of calculating the total amount of travel and devising a plan to offset the firm's carbon footprint resulting from travel. The Green Team also meets regularly to discuss ideas for improving recycling, lowering water usage, and other ways to positively impact the environment.

"At this point, our biggest challenge is figuring out carbon accounting. It's a complex issue and we want to make sure we get it right before putting together a plan to reduce our footprint."

Helping Customers Go Green

Global Shop Solutions builds features into their ERP software that actively encourage green processes in customers' manufacturing plants.

The software enables manufacturers to operate in a paperless or near-paperless environment by putting information at everyone's fingertips via digital dashboards rather than printed reports. The cloud offering gives customers' employees the flexibility of working from home, reducing the impact of traveling to and from work five days a week. Global Shop Solutions also helps customers cut down on travel by offering training and consulting online.

"We care about our employees, our customers, and the world around us. Lowering our carbon footprint is definitely the right thing to do."

About Global Shop Solutions

We simplify your manufacturing.™ Global Shop Solutions ERP software provides the applications needed to deliver a quality part on time, every time from quote to cash and everything in between including shop management, scheduling, inventory, accounting, quality control, CRM, and 25 more. Available in the cloud or on-premise, our



manufacturing customers benefit from real-time inventory accuracy, improved on-time delivery, lower administrative costs, increased sales, and improved customer service. Headquarters in The Woodlands, Texas includes a state-of-the-art R&D facility and Global Shop Solutions training center. Through its offices in the U.S., Mexico, Indonesia, Singapore, Australia, New Zealand, and the United Kingdom, the company supports thousands of manufacturing facilities in over 25 countries and nearly 30 industries.

www.globalshopsolutions.com



EDGEFACTOR
**DIVERSITY
 IN SKILLED TRADES
 TOOLKIT**

CELEBRATE DIVERSITY IN MANUFACTURING AND SKILLED TRADES WITH NTMA AND EDGE FACTOR

During March, April and May 2022, NTMA and Edge Factor are partnering together to equip our members – as well as educators, and industry workforce leaders across the country – with high-impact tools to showcase training and career pathways in the skilled trades. Edge Factor’s newest Toolkit for the Spring is themed around “Diversity in Skilled Trades.” Our goal is to engage students and job-seekers, reach parents, and connect businesses and schools to share the message that the skilled trades provide rewarding career opportunities for every community member.

“People need hope. Students, job-seekers, immigrants, and families are looking to the future asking themselves, “so what comes next? Sharing the videos and resources in this toolkit will undoubtedly change lives, as we open people’s eyes to career opportunities that will enable them to enjoy the work they do, support themselves and their families,

and strengthen their community,” said Larissa Hofman, Vice President of Edge Factor.

“Careers in skilled trades provide people with stable jobs that are always needed - they are always in high demand! We are proud to present this Diversity in Skilled Trades toolkit in partnership with NTMA. We are thankful for their commitment to spreading hope and providing tangible workforce development solutions. We know this toolkit will have a far-reaching impact on people’s lives, on companies that are looking for new team members, and across North America as the skilled trades fuel economic growth.”

The Diversity Toolkit

This toolkit is free for everyone to access, and includes high-impact media that features skilled trades professionals from different cultural backgrounds, highlights how Science, Technology, Engineering,

Art, and Math (STEAM) comes alive in a variety of industries, and teaches the importance of soft skills like teamwork, problem-solving, and lifelong learning. You can view these tools today at: <http://edgefactor.com/diversity-in-trades>



How can you access the FREE Diversity in Skilled Trades Toolkit? To access the free Diversity in Skilled Trades Toolkit, all you need to do is register at: <http://offers.edgefactor.com/diversity-in-trades>! As soon as you register, you’ll gain instant access to the tools and resources, and be able to share the links across your network!

The Diversity in Skilled Trades Toolkit is available for FREE through May 31, 2022.

OVERTON INDUSTRIES NAMED TOP SUPPLIER OF 2021 BY EAGLEPICHER TECHNOLOGIES

NTMA Indiana Chapter Member Overton Industries’ Tool & Die Division was named one of EaglePicher Technologies’ Top Suppliers for 2021. Out of EaglePicher’s more than 1,200 suppliers, Overton Industries was one of only two companies to receive this recognition.

Overton & Sons Tool & Die (a division of Overton Industries) has been in business for over 50 years

servicing a variety of industries, primarily automotive. They are located in Mooresville, IN, and employ approximately 50 people, and specialize in powdered metal compacting dies and metal stamping dies, utilizing carbide, powdered metal steels, and tool steels.

Congratulations to Overton Industries and their employees on this honor!



CONGRATULATIONS TO ALLISON GIDDENS FOR BEING NAMED A 2022 STEP AHEAD AWARD WINNER



NTMA congratulates Allison Giddens of NTMA Member Company Win-Tech, Inc. for being honored as a 2022 STEP Ahead Award Winner!

From the Manufacturing Institute:

As an integral part of The Manufacturing Institute's STEP Women's Initiative, the STEP Ahead Awards have made a profound difference in reducing the gender gap in manufacturing. The STEP Ahead Awards recognize women in science, technology, engineering, and production careers who exemplify leadership within their companies. This national honor identifies top talent in the manufacturing industry and further encourages award winners to mentor and support the

next generation of female talent to pursue modern manufacturing careers. The STEP Ahead Awards give women across the country a platform to showcase the incredible opportunities the industry has to offer, whether they are running the company, designing the next big product, or testing innovations on the shop floor.

"The STEP Ahead Awards are central to the industry's efforts to recognize and empower women," said The Manufacturing Institute President Carolyn Lee. "Manufacturing is averaging more than 800,000 open jobs a month in the past year, and we can't close that gap without closing the gender gap."



Allison is President at Win-Tech, and also serves as a member of the AMPED Educational Team. We salute the continued impact she and all other STEP Ahead recipients have had in the precision manufacturing industry.

NEW TECHNOLOGY MAKES THE IMPOSSIBLE, POSSIBLE AT DURA-METAL PRODUCTS CORPORATION

By: Molly West, Pittsburgh Chapter NTMA



For more than 50 years, NTMA member company Dura-Metal Products Corporation has made a name for itself manufacturing precision machine components. Long known for their quality work with EDM, grinding, honing, lapping, machining, and polishing, a few years ago, the company began printing 3D parts for internal use. In 2020, Dura-Metal is fully committed to building not only internal additive capabilities, but also a complimentary collaborative partner network. Today, Dura-Metal has a team of additive directed and focused employees working in a state-of-the-art facility just a mile down the road from their original location in Irwin, Pa. Known as ADDTEC3DM, they are making the impossible, possible when it comes to high detail and complex parts that cannot be made conventionally.

"For Dura-Metal Products, it was a decision based on a forward look into the next 20 years and beyond," said Bob Kettering, president of Dura-Metal Products Corporation. "It's our goal to position this company to be ahead of the curve for the fast-coming technology revolution. In the 1980s, Wire EDM was a special niche for precision manufacturers. Today, without

the technology, a tool and die shop cannot exist. In 2022, additive manufacturing technologies are not as narrowly focused as Wire EDM making it quite confusing to determine an entry point for a typical manufacturer. Truth is there is no direct answer to this challenge," said Kettering.

Dura-Metal utilizes both additive and subtractive methods to manufacture precision components. "We provide products including ferrous & non-ferrous metals as well as polymers. Products range from previously cast steel impellers, to vision systems and automotive after-market components. We also work with early-stage entrepreneurs working to develop new products. Our team has risen to the challenge, and we are very proud of their accomplishments," said Kettering.

Their MarkForged Atomic Diffusion Additive System (ADAM) utilizes engineered polymer (FFF/FFM) as well as metal FFF/FFM printing for short-run and quick response projects. Their metal system can print tool steels including H13, A2, D2, Stainless Steel 17-4PH,

Inconel 625 and copper. Additionally, Dura-Metal supports 316L stainless steel in their GE Direct Metal Laser Sintering (DMLS) to complement parts requiring high corrosive resistance. Adding production printing in Nylon PA 12 with HP 5200 Multi Jet Fusion (MJF) technology is the final touch of the depth needed in a strategic partner. Parts that were once only dreamed of manufacturing with internal chambering are now possible with additive manufacturing.

"The depth of technologies and knowledge in the additive and subtractive spaces allows us to flex uniquely," said Sean Farrell, manager of additive manufacturing operations. "Approaching our customers, problems with 'The Hybrid Connection' mindset drives accessibility to reliable supply chains and creates value in ways never previously conceived. It starts with understanding, and that's no more than a phone call way."

With a customer service focus, Dura-Metal hopes to help its customers learn, grow, and adapt supply chains in the 3D additive space.

www.dura-metal.com



HEIDENHAIN

HESP

The vocational training support program

INTRODUCING HEIDENHAIN EDUCATION SUPPORT PROGRAM (HESP)

For Manufacturing, the Digital Revolution Meets Global Vocational Training

To assist in training the next generation of manufacturing professionals, NTMA National Associate Member HEIDENHAIN is offering a collection of educational services and products to meet the demands for today's digitization of data in NC metalworking.

This worldwide initiative called the HEIDENHAIN Education Support Program (HESP) promises to bring the latest advancements on the shop floor to current classrooms of vocational training centers, universities, and corporate trainee programs.

Digital services and their remarkable speed are now commonplace and only growing. With HESP, HEIDENHAIN is making its own important contribution to training the next generation of metalworkers by providing highly cost-effective, state-of-the-art resources to educators that can include computer programming stations, software, and learning

materials for fast and highly accurate milling and turning needs. HESP also includes offers to train the trainers at significantly reduced prices.

HEIDENHAIN's programming stations are based on the same software foundation as its CNC controls, thus making them ideal vocational training tools to give students the confidence they need to program in the manufacturing world. HESP's learning materials include practical course supplies for explaining complex topics, as well as support posters for the classroom.

Those that are familiar with HEIDENHAIN will especially appreciate the special opportunity for educators to obtain HEIDENHAIN's Connecting Machining package of functions and its StateMonitor MDA software, as well as the option of its online HIT (HEIDENHAIN Interactive Training) program. Full program details are available on the HESP microsite: www.hesp.heidenhain.com.

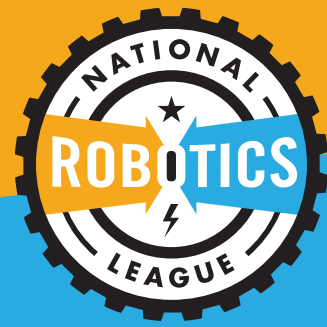
About HEIDENHAIN

DR. JOHANNES HEIDENHAIN GmbH, headquartered in Traunreut, Germany, develops and supports motion control feedback solutions for the machine tool, semiconductors, electronics assembly and test, metrology, automation, medical, energy, biotechnology, and other global markets. HEIDENHAIN employs approximately 6,000 people worldwide in its core business activities. The North American subsidiary is HEIDENHAIN CORPORATION, headquartered in Schaumburg, IL, and San Jose, CA, and has been serving the US industry for over 50 years. Here nine company brands are represented.

More information at: www.heidenhain.us/about-us

Engaging Manufacturing's Next Generation.

**FULL CONTACT
INNOVATION
IS BACK!**



**NRL 2022 National Championship
& College Invitational**

**May 20-21
Robert Morris University**

**Join Us In
the Name of
Maximum
Carnage!**



Open and Free to the Public!

Sparks will fly and metal will crunch again at the NRL 2022 National Championship & College Invitational at the UPMC Events Center on the campus of Robert Morris University, in Moon Twp., PA, coming May 20-21.

The best NRL Bots from across the country will battle in a double elimination gladiator-style competition to see who is the best of the best. You are invited to witness **FULL CONTACT INNOVATION** live and in-person!



Opening Round—Friday, May 20 / 7:00—10:00 PM - Competition Continues—Saturday, May 21 / 9:00 AM—5:30 PM

[Visit gonrl.org](http://gonrl.org) for more information

FIXING THE DISCONNECT BETWEEN EDUCATION AND THE WORKFORCE

By: Bill Padnos – Executive Director, AMPED & National Tooling & Machining Foundation

There has been a long-standing challenge in creating a seamless connection between education, industry, and the government. With the COVID-19 pandemic moving toward its end, it's critical to smooth this connection and get people into our industry's workforce. There are plenty of skills that students are able to learn in school that will enable them to get their foot in your doors, but our industry needs to communicate these skills to educators. In addition, the government needs to recognize that earning a credential or certificate should not be the only measuring stick. In the end, the only credential that should matter is: J.O.B.

Another disconnect is our students don't always know the value of what they've learned – and can't always explain it on a job application or their resume.

Educators and counselors are not trained to explain how a class will benefit the student when it is time to get a job; that being, because your potential future employer is going to want you to have these skills. Worse yet, I don't think we always help the students understand the value of the informal education they're receiving by participating in extracurricular activities and how to interpret that value in a job interview.

Do these obstacles arise in curriculum design? In credential design? Or simply in how we communicate with students about the value of all post-secondary education options?

The answer is “YES” to all three. This is why there is currently a national focus on how to qualify the skills, experiences, and education a student acquires in a way makes sense to all parties. How do we help develop our faculty to think outside the classroom? There are amazing teachers out there that do that, but not all of them can also help the students interpret what they learn, both informally and formally, in the classroom to the world outside. Further, I am not sure that the converse is true either. We don't always have

good conversations with business and industry that say, “Our student is going to come to you with this. They may use a different vocabulary, but it doesn't mean that they don't have the skill.”

The real difficulty is in coming up with a standard set of competencies that everyone will agree upon, and determining the “where” and “how” a student will learn them. Part of it is an image problem of post-secondary education. When I graduated high school in 1989, community college was always seen as the last resort. If you couldn't get into the university you wanted, you go there; or if you're in high school and taking the little yellow bus in the afternoon to the technical centers, a stigma existed. “Oh, he's a burnout or one of the bad kids.”

In fairness, the looming mass exodus of baby boomers from the workplace is putting more pressure on all of us to fix this disconnect. The larger manufacturing companies that have never had issues with finding talent are now utilizing their vast resources to be more aggressive in the search for workers. This increase in competition for talent on all levels is squeezing out small companies – and many of do have the ability to significantly increase their starting pay or have recruiters in the field on a constant basis.

This is why the industry must take advantage of its seat at the table. Your silence enables others to dictate to education and the government what skills students should be learning in school. If you believe that students in machining programs should first learn the fundamentals before CNC programming, then your voice needs to be heard by those that make the decisions on what is taught in the classroom in your community. Through multiple organizations like ACTE and NCATC, along with our lobbying efforts in DC, NTMA has been spreading the message that classroom technical education curriculum decisions need to reflect the needs of all local manufacturing companies, not just the largest employers.



In 2022, our federal government is projected to spend over \$18.6 billion – nearly \$800 million over the previous year - on workforce development programs. A majority of these tax dollars are flowing from the federal government to the states, which then are allocated locally. Manufacturing companies all of sizes have the ability to drive how that money is being spent in their community to educate your future workforce. However, the disconnect between education, industry, and government will continue if you allow others to dictate what is receiving the funding to pay for it.

If you need help on how to have your voice heard in your community, let me know – reach out to bpadnos@ntma.org and I will be glad to be of assistance.

THE NTMA BUSINESS CONDITIONS REPORT FOR DECEMBER 31, 2021, IS NOW AVAILABLE

This report comes out as we continue to face some of the most challenging times for our businesses and our country. A geographical “snapshot” of business trends and conditions in the special tooling and machining industry, the report covers the second half of 2021 and a projection for the first half of 2022.

We offer the Business Conditions Report twice each year to help you understand where your best opportunities may be, and what you may expect to face in your business. The report contains survey results gathered from contract manufacturing companies – your peers – broken down by industry segment and geographic region with comments and insight into current and expected business conditions.

Results of the survey indicate:

- Overall business conditions during the 6-month period ending December 31, 2021 were “Very Good to Excellent” for 44% of respondents, consistent with the results of the June 2021 Report.
- Looking ahead, 64% are projecting that the next six months will bring a “Moderate-to-Substantial Increase” in business conditions.
- The average work week per employee ticked up to 44 hours, while the average future work on the books dropped from 38 weeks to 21 weeks.



We appreciate our members continued support in the creation of these benchmarking reports!

The December 2021 Report can be viewed at: <https://ntma.org/resources/reports/business-conditions/>



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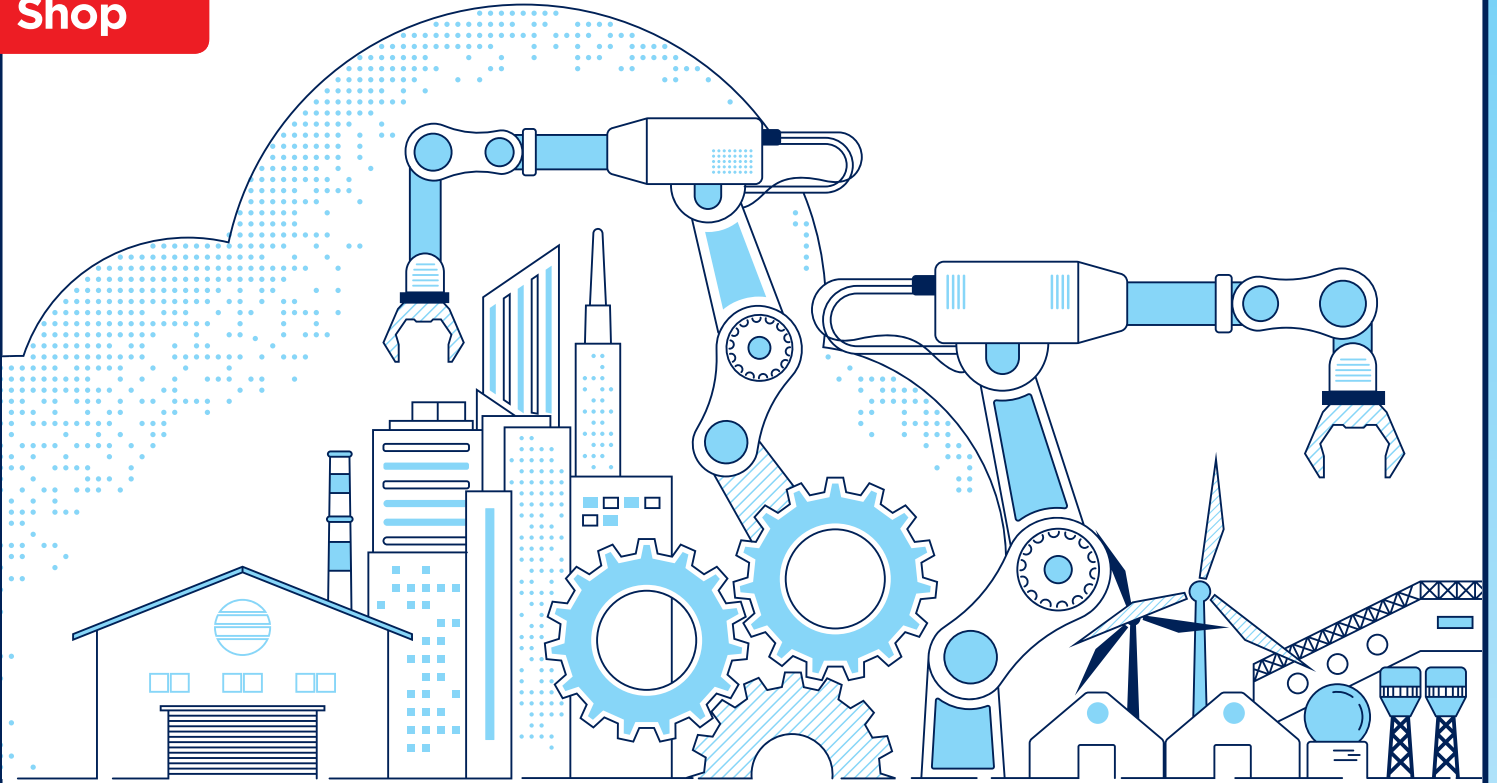
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EMERGING LEADERS RISING CLASS OF 2022 NOMINATIONS – NOW OPEN

We are now taking nominations for the EL Rising Class of 2022! Managers and supervisors of these young, talented, and emerging manufacturing professionals, submit your nominations today!

We will be selecting up to 15 individuals for this prestigious award. The selected individuals will be recognized in the July issue of The Record, with their photos, professional information, and accomplishments. Individuals selected for the EL Rising Class of 2022 will be invited to attend the Engage 2022 at a special rate and will be recognized on stage during the awards ceremony. This will offer them an opportunity to connect with one another,

gain valuable recognition, and develop their skills and knowledge. They will also be invited to attend the 2022 Emerging Leaders Conference, where they can continue to grow and learn in this great profession.

As a leader for your company who is focused on the future, you have already identified your future leaders. Now you need to make sure they are being recognized for their work and accomplishments. Please do not hesitate, enter your outstanding emerging leaders today!

Nominations for the EL Rising Class of 2022 are open to all regular members, including our National Associates.



The Process to Nominate Is Simple

Email Kristen Hrusch (khrusch@ntma.org) with the following information by May 31, 2022.

- Name of nominee
- Company name
- Contact information for the nominee
- Achievements and contributions
- Any additional information that is pertinent

The group will be notified by the second week of June, in order to obtain more details for the July issue of The Record.

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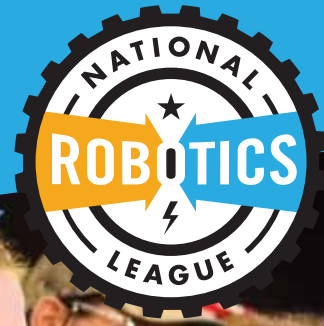
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CAL U, California, PA

AWT Robobots / April 30

Lakeland Community College, Kirtland, OH

Xtreme Bots / April 30

Staub Manufacturing Solutions, Dayton, OH

BotsIQ Wisconsin / May 7

Waukesha County Technical College, Pewaukee, WI

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- Call (215)-893-1234 and reference Engage Summit East
- Rooms are based on availability or until the block is full

Contact Kristen Hrusch for more information: khrusch@ntma.org



NTMA SERVICE AWARDS 2022

NOW ACCEPTING NOMINATIONS

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

Award categories are:

MEMBER AWARDS

HONOR AWARD

Nominate a member for continuing meritorious service and dedication to the industry and/or the Association by a regular member; traditionally awarded for longevity of service in dedication, as opposed to a single act or service in a short-time industry or Association position.

L.A. SOMMER MEMORIAL AWARD

For outstanding and continuing service of the highest magnitude; emphasis is placed on service to the Association by a regular member, both of the highest order and over a period of time, connoting excellence in a particular role in NTMA, rather than as a participant in a single event.

WILLIAM E. HARDMAN AWARD FOR EXCELLENCE IN TRAINING

For a company or individual (regular member or education member) which consistently demonstrated strong support and active participation in structured training for the precision custom manufacturing industry.

NON-MEMBER AWARD

DISTINGUISHED SERVICE AWARD

For outstanding service to the industry by a person outside the NTMA regular member companies.

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

Submit your nomination(s) by Friday, August 12th, 2022.

For a nomination form, contact Linda Warner at lwarner@ntma.org



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PURPOSE:

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

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

SPONSORSHIP OPPORTUNITY:

- Conference exposure via introductions, etc.
- Promotional exposure: web, print, blogs, and emails that promote and support the award.

SUBMISSION DUE DATE:

Please submit your application by September 1, 2022 to be considered.

For more information, please contact

Linda Warner at lwarner@ntma.org or 216-264-2824.

Applications and self-assessment documents can be found here:

<http://www.ntma.org/resources/documents/6S-excellence-program>

Applications should be sent to 6Saward@ntma.org

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What Does CMMC Mean for You?

By: Jonathan Boes – Digital Communications Specialist, Core Business Solutions, Inc.

If you contract with the Department of Defense (DOD) – or if you hope to do so in the future – you’ve probably heard about Cybersecurity Maturity Model Certification (CMMC). This cybersecurity standard will soon be required for all DOD contractors, even subcontractors several steps removed from direct work with the department.

Even though CMMC has yet to appear in contracts, it has already undergone several major changes. This has created a good deal of confusion for affected businesses. This article will shed some light on CMMC compliance and what it means for you.

Why CMMC?

The DOD spends billions on new technologies to defend our nation. When those designs leak to America’s adversaries, that money goes to waste, and that tactical advantage disappears.

The DOD’s own networks boast some of the best cybersecurity in the world. But DOD information doesn’t only live on DOD networks. It also flows down to contractors.

America’s adversaries have found it much easier to steal information from contractors than from the DOD itself. By breaching the networks of lower-level contractors, they can exfiltrate information piece by piece until the larger puzzle comes together.

To fix this gap in the nation’s cybersecurity, the DOD has introduced CMMC. For the first time, many DOD contractors will require an official third-party cybersecurity assessment.

Does CMMC apply to me?

If you perform any sort of work for the DOD, whether as a prime contractor or a subcontractor, some level of CMMC will apply to you.

The initial version of CMMC (CMMC 1.0) provided one exception: commercial off-the-shelf (COTS) products. If you’re providing the DOD with the same unmodified product you sell to any customer, you may not be required to comply with CMMC. However, as requirements continue to develop, even COTS suppliers should prepare.

Ultimately, your required CMMC level will depend on the information you handle.

FCI and CUI—Do I Have Them?


CMMC protects two types of government information: Federal Contract Information (FCI) and Controlled Unclassified Information (CUI).

Federal Contract Information (FCI)

“Information, not intended for public release, that is provided or generated for the Government under a contract to deliver a product or service to the Government.”

– Official Government Definition of FCI

FCI is any non-public information related to a government contract. Every government contractor handles FCI. This does not include technical information. If you handle any sort of designs,



drawings, or manuals from the DOD, you handle more than just FCI. Contractors who only handle FCI will require the lowest level of CMMC compliance, CMMC Level 1.

Controlled Unclassified Information (CUI)

“CUI is information the Government creates or possesses, or that an entity creates or possesses for or on behalf of the Government, that a law, regulation, or Government-wide policy requires or permits an agency to handle using safeguarding or dissemination controls.”

– Official Government Definition of CUI

CUI is not technically classified, but the government considers it sensitive enough to require protection. This is technical information provided to you by the government or provided to the government by you. Common examples include designs, drawings, specifications, manuals, and technical reports. Essentially, this is any data that goes beyond basic contract information. You can find a full CUI registry at www.archive.gov/cui.

Government contracts do not always label CUI as such. If your contracts contain existing cybersecurity requirements such as DFARS 252.204-7012, it's safest to treat everything in those contracts as CUI. It's better to prepare now than risk losing a contract in the future. Most contractors who handle CUI will require CMMC Level 2. In rare cases of highly sensitive CUI, some contractors will require CMMC Level 3.

When will this take effect?

CMMC will begin appearing in contracts upon the completion of the DOD's rulemaking process. Current estimates place this at 9 to 24 months. These estimates have changed in the past, and they could change again. But that doesn't mean you can afford to wait. As a DOD contractor, you face some cybersecurity responsibilities right now.

What should I do now?

Under current DFARS regulations, all DOD contractors must submit a cybersecurity self-assessment score to the SPRS (Supplier Performance Risk System) database.

This self-assessment pertains to the security requirements of NIST SP 800-171. These requirements match the current requirements of CMMC Level 2. Contractors should take this self-assessment seriously. Recently, the Department of Justice has announced the Civil Cyber-Fraud Initiative. Under this initiative, the government can claim damages of up to \$23,607 per claim from contractors who make false cybersecurity attestations. Once CMMC officially rolls out, many contractors will still be required to submit a self-assessed SPRS score.

What are my options?

CMMC compliance can be a daunting task, especially for contractors who handle CUI. Most contractors do not have the required technologies or technical expertise on hand. For many, upgrading their current systems for CUI storage would amount to a complete network overhaul. Even if you outsource your IT, your IT provider likely doesn't have the specialized cybersecurity knowledge for CMMC.

For most contractors, it's simpler and more effective to use a managed enclave solution. Enclave solutions, such as CORE Vault™, allow contractors to store and transmit government information through a separate, secure environment. This separates CUI from your on-premise network, meaning you don't need to overhaul your current systems. Instead, you rely on a cloud-based environment specifically built for CMMC compliance.

Key Takeaways

In summary, don't wait to prepare. The CMMC rulemaking process moves slowly, but the DOD has made cybersecurity a top priority. Stay on top of your current requirements, such as SPRS score submission. Determine the type of information you handle, and when in doubt, assume you handle CUI. When the new requirements roll out, you can be prepared to keep your contracts and stand out from competitors.

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CMMC 2.0 Is Here. What Does It Mean For You?

In November 2021, the Department of Defense revealed CMMC 2.0, signaling major revisions to the original model in the DFARS Interim Rule.

What are these changes, and how do they affect your business?

CMMC 2.0 – What Has Changed?

The Department of Defense originally introduced Cybersecurity Maturity Model Certification (CMMC) to add stronger cybersecurity with greater accountability to the Defense Industrial Base (DIB). During its review phase, the standard received vocal criticism from smaller contractors. With the initial internal review now complete, it appears the DoD has taken those criticisms to heart.

Here are the biggest changes to CMMC:

No More Transition Levels

CMMC 2.0 brings a major structural change to the original model. CMMC 1.0 contained five maturity levels. This new version removes the transition levels—Level 2 and Level 4—creating a cleaner model with just **three levels**.

CMMC 2.0 Level 1 (Foundational) remains the required level for companies who don't handle Controlled Unclassified Information (CUI) but only handle Federal Contract Information (FCI).

CMMC 2.0 Level 2 (Advanced) replaces the original CMMC Level 3. This is the required level for contractors who handle CUI. However, it only contains 110 of the 130 practices in the original Level 3. More on that below.

CMMC 2.0 Level 3 (Expert) now contains the more stringent requirements of the original Level 5. Relatively few contractors will require this specialized level of cybersecurity.

No More Third-Party Assessment for Level 1

If you only require CMMC Level 1, this is great news.

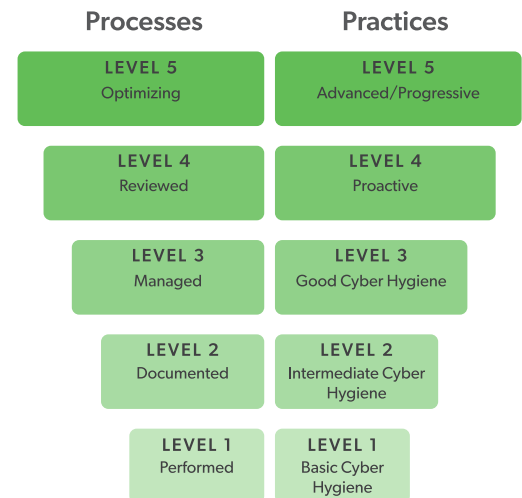
In the original CMMC model, every maturity level required official assessment by a Certified Third Party Assessment Organization (C3PAO).

Now, businesses at CMMC Level 1 will not require such an assessment. Instead, they will perform annual self-assessment with affirmation by senior leadership, submitted to the Supplier Performance Risk System (SPRS). This will save small contractors big money in assessment costs.

No More Maturity Processes

CMMC 2.0 no longer contains the maturity processes of the original version. This drastically cuts down the required documentation and removes much ambiguity from the old model.

CMMC 1.0



CMMC 2.0



ALMOST ALL LEVEL 2 COMPANIES WILL REQUIRE THIRD-PARTY ASSESSMENT

With the update to CMMC v2.0, the DoD originally proposed a “bifurcation” of the original CMMC Level 3 requirements, prioritizing certain acquisitions for third-party assessment while allowing others to self-attest their compliance.

But according to recent updates, this bifurcation has been set aside. Almost all contractors who handle CUI will require third-party assessment. On rare occasions, provision might be made for companies who handle non-essential CUI.

Given the direction of current rulemaking, it’s best to prepare as if all CMMC Level 2 companies (formerly Level 3) will require a third-party assessment.

NO MORE ADDITIONAL PRACTICES

This directly affects contractors who handle CUI. The original CMMC requirements added 20 unique practices to the original 110 of NIST SP 800-171. These 20 additional requirements have now been dropped entirely.

110 practices still isn’t a small number, but this removes some of the burden from CUI-handling contractors.

Please continue to stay updated with us on the latest rules for CMMC in 2022.

PLAN OF ACTION AND MILESTONES (POAM)

The previous version of CMMC required a 100% passing grade. But now, as with former DFARS requirements, contractors can submit a time-bound “Plan of Action and Milestones” to cover non-critical areas of non-compliance.

This means you no longer need a perfect compliance score to receive certification. You can present a definite, time-framed plan to fill reasonable gaps in your compliance. After a period determined by the DoD, you will be re-assessed to ensure the POAM items have been remediated.

Note that some practices may be considered too essential for a POAM to cover. Such items will still require full compliance.

This change should relieve a good deal of stress from the assessment process, offering a path forward if you don’t achieve a perfect score.

WHAT THIS MEANS FOR YOU

If you’ve been preparing for CMMC, these changes might feel overwhelming.

CMMC still has not appeared in actual defense contracts. The rollout will likely take longer than previously expected as these proposed changes are finalized. Even so, contractors must continue to meet the self-assessment requirements of the DFARS Interim Rule.

If you’re expecting to require CMMC Level 1 or Level 2 (previously Level 3), these changes should bring some relief. But they shouldn’t be seen as a reason to stop preparing. CMMC is still on the way, and every contractor will still require some level of certification, self-assessed or otherwise.

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For the latest information on CMMC, please visit these Government organizations:

<https://www.acq.osd.mil/cmmc/>

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Business Forecasts to Help You Profit

By: Kathy Webster – Managing Editor, AMT

You need to know what's going to happen in the economy to make the best business decisions for your company. Although manufacturing technology orders surpassed \$5.9 billion in 2021 – marking the most successful year ever – some businesses have concerns.

How much longer will unpredictable supplies and rising prices be around?



Alan Beaulieu, President - ITR Economic

Get answers and data from leading national economist and ITR Economics President Alan Beaulieu, who will speak at AMT's MFG Meeting, April 27-30, in Bonita Springs, Florida. Beaulieu will share his forecast through 2023 and offer insight into how manufacturers can capitalize on opportunities, practical advice to stay ahead of the competition, and data to help you strategically plan.

Beaulieu specializes in forecasting and planning based on business cycle trend analysis. He will drill down into details on key economic indicators and how they'll influence the supply chain, workforce,

inflation and interest rates as they relate specifically to the manufacturing technology industry. You'll gain valuable information to prepare for what's ahead to maximize investments, avoid the misallocation of resources, and manage spending.

AMT's MFG Meeting brings together manufacturing technology leaders from across North America to connect and gain insight into not only economic forecasts, but also market and technology trends, the political environment, leadership and management styles, and potential opportunities.

Networking events abound, and selected speakers include:

- *Chris Czarnik, CEO, Career [RE] Search Group*
- *Ken Gronbach, demographer and CEO, KGC Direct*
- *Jason Jones, co-founder and CEO, Hybrid Manufacturing Technologies*
- *Andra Keay, managing director, Silicon Valley Robotics*
- *Jenny Radcliffe, the people hacker, Human Factor Security*
- *Larry Sabato, director, UVA Center for Politics*

Join your industry peers at the MFG Meeting to help drive manufacturing change. Register today using the special NTMA discount, "BETTER2GETHER" and visit MFGMeeting2022.com for details.

Why go to the MFG meeting 2022?

"The level of the speakers that are brought in for The MFG Meeting, particularly the economic speakers and forecasters, are highly valuable for us."

– Annette Carroll, Director of Marketing, Okuma

"I enjoy the networking opportunities at The MFG Meeting as well as catching up with peers from the industry. Talking face to face lets me build new connections for future business and get new ideas for our company."

– Neil McGill, Director of Operations, Allendale Machinery Systems

"The MFG Meeting is tremendous because you can see trends in the industry."

– Olaf Tessarzyk, CEO, MiQ Partners.





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CERTIFICATIONS AND COMPLIANCE:

KEYS FOR THE FUTURE

By: Scott Sawyer — Founder and CTO, Paperless Parts

The talk about cybersecurity is reaching a fever pitch as cyberspace becomes a front line in global conflicts. Governments, businesses, and consumers alike agree we need to strengthen our networks, but very few understand the threats and know what actions to take. Today's attacks run the gamut from hijacking consumer accounts to sending spam and holding small business data ransom, to shutting down critical infrastructure, to being a component of military action. We hear warnings about impending attacks; the truth is, the attacks are already here.

Manufacturers of all sizes should be paying attention. Not only is manufacturing frequently targeted as part of America's critical infrastructure, but a large percentage of American custom precision manufacturers are ITAR registered and make (or want to make) parts for the defense industry. Businesses in this industry are targets whether or not they realize it. America spends billions to develop military technology. If adversaries are able to steal this intellectual property, we lose our technological edge. That's why the government spends billions of dollars on cybersecurity. However, technical data about these systems flows through the supply chain largely without the same security protections. As a result, we see adversaries fielding systems, such as naval ships and drones, that look remarkably similar to the systems Americans have spent big dollars and many years to develop.

For many reasons, 2022 seems to be a turning point for cyber regulation. First, the Department of Defense has worked through the bulk of the bureaucracy needed to roll out new cybersecurity requirements to the defense supply chain. Second, the Biden administration has established a cybersecurity strategy calling for stricter security requirements on software purchased by the government and for rules requiring businesses to report cyber incidents


and ransomware payments. And third, in the wake of Russia's invasion of Ukraine, the need for better cybersecurity seems to be a very rare example of something Congress can agree on.

CMMC: Coming Soon to a Contract Near You

Cybersecurity Maturity Model Certification (CMMC) is a Department of Defense initiative to improve the security posture of the defense supply chain. Originally announced in 2019, CMMC was updated in late 2021 with some small changes and a plan to fully roll out within 24 months. The core requirements haven't changed and are based on a standard called NIST 800-171, which describes 110 controls that must be implemented. These controls range from enacting written policies to using government-approved algorithms to encrypt data. If this standard sounds familiar, it's because NIST 800-171 has been a requirement for the defense supply chain since 2018. However, CMMC replaces the current system of business assessing themselves with a system requiring approved third-party assessors to audit manufacturers before being awarded a contract or subcontract. For shops that haven't taken the self-assessment seriously, time is running out. Getting a shop compliant can take years and cost hundreds of thousands. These requirements can't be implemented overnight.

There is a lot of uncertainty around exactly when CMMC will hit your business, who will be certified assessors, and how much it will cost. But by all indications, this wave is coming for thousands of US manufacturers. This will be particularly challenging for small businesses that have been reluctant to proactively invest in cybersecurity. While it's tempting to think the government will take steps to find a way to reduce this burden on small businesses, in reality, CMMC is already a stripped-down version of tougher





security standards. Given the sensitivity of defense data and the current threat landscape, many pundits believe the government would rather see wide-scale consolidation in the supply chain than continue to kick this can down the road.

Future Regulations and Requirements

Government regulations move slowly, and there are already hints at how they may evolve in the coming years. The Biden administration issued an executive order in 2021 to begin modernizing standards to adopt so-called Zero Trust Architecture. In the past, IT security relied on hosting applications and files on-premises and restricting what devices could get on the local network. Remote access, if available at all, happened through a VPN. But today, most applications are moving to the cloud, employees expect to access IT systems from anywhere, and people (through things like phishing and malware) are the biggest target for cyber-attacks. Zero Trust is named for the fact that your local network or a company computer isn't trusted any more than an employee's personal device or a public Wi-Fi network. In other words, simply being on a company network is not enough to get access to any data.

Even shops that don't make parts for the defense industry are starting to face tough questions from prospective customers. Cybersecurity questionnaires have become table stakes to work with OEMs and many larger customers. The market expects manufacturers to have written policies, employee background checks and training, up-to-date software, and security controls like multi-factor authentication and malware protection. Additionally, many states and countries are passing data privacy laws, like the European Union's GDPR. While these are mostly focused on protecting consumers, some of these laws impose requirements on B2B businesses, like parts manufacturers. The federal government has recently debated legislation to require critical infrastructure companies (like some manufacturers) to report certain types of cybersecurity incidents and ransomware payments. Your shop may need a compliance plan.

What Your Shop Needs to Do

Every business needs to take action on cybersecurity. No matter who you sell to, if you manufacture custom parts, your customers are trusting you with their intellectual property. For example, if you've traditionally archived all your engineering drawings and CAD files on a company-wide shared drive, that's an alarming risk for a customer concerned about ransomware or data breaches. Improving your security posture requires an organizational commitment to develop and implement effective policies, train employees, and continuously enforce and monitor. Manufacturers need to evaluate their software vendors, as well. Legacy systems that have struggled to modernize and retool as cloud-native applications may not be viable options for much longer. For staffing, larger companies can recruit, hire and retain a talented IT team. Smaller companies should consider contracting with a Managed Service Provider (MSP), who can manage devices, user accounts, and networks as a service.

For manufacturers who dabble in defense work, a decision point is coming where they need to commit to cybersecurity compliance or walk away from certain contracts. The first step is to bring in an advisor who can quickly analyze security gaps and estimate the cost and timeline to get compliant. From there, business leaders can make the business case for pursuing defense work in the future. From there, you can partner with experts and move quickly on remediation. Even before CMMC is fully implemented, you can get your business compliant with NIST 800-171 and get audited by a third-party. If you've met that standard, you've taken most of the risk out of achieving CMMC.

This isn't the first time this industry has faced challenges and re-invented itself. Precision manufacturers have adopted more automation and advanced tools to stay relevant. In the same way, it's time to rise to the challenge of cybersecurity.

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CERTIFICATION & COMPLIANCE: A SECRET WEAPON IN BUSINESS

By: Allison Giddens – President, Operations, Win-Tech, Inc.

Today's shop owners are bombarded with certification options: ISO9001, AS9100, NADCAP, CMMC, ISO27001, CWI – it can be challenging to prioritize and predict what lies ahead for the industry and what is best for a business. Choosing to be compliant or certified to a quality standard or industry framework can be a big investment, but if approached with intent can open doors and set a business apart from its competitors.



Allison Giddens - President, Operations, Win-Tech, Inc.

Standardizing Expectations

Certifications can either be barriers to entry or kick doors wide open, depending on what certifications a business holds. Many companies require any number of certifications from their suppliers, depending on the type of work they are seeking. In many cases, the requirements hinge on mitigating their own risk, knowing that if their supplier is working from a proven and standardized set of instructions, there are assumptions that can be made relatively safely.

In recent years, the manufacturing industry is beginning to see additional “non-traditional” certifications trending in customer supplier-assessment surveys: LEED, cybersecurity, supply chain risk management, and others. Obtaining certifications in business operations does not come cheaply, but in some cases, a business liability insurance discount may be available, depending on the types of risk that are mitigated by complying with a standard. Additionally, complying with a standard may help improve quality or decrease the chances of costly errors, although it is nearly impossible to measure the costs associated with what was avoided.

Leaving Capacity to Tackle the Difficult

In Dr. Atul Gawande's “The Checklist Manifesto: How to Get Things Right,” the author argues that checklists and process standardization allows people to get the simple stuff right every time, leaving “room for craft and judgment and the ability to respond to unexpected difficulties that arise along the way.”

Certifications often come with standards or framework guides that a business will plug in its processes, tweaking checks and balances along the way. By creating a process that leaves little (or no) room for interpretation, the simple run-of-the-mill challenges that a business experiences every day are already accounted for and managed.

Gawande perfectly puts it: “The volume and complexity of what we know has exceeded our individual ability to deliver its benefits correctly, safely, or reliably.” Why not put what we know and do to paper, streamlining our processes into proven guidance, and avoid deviation from what we already know works?

Making it Work for Your Business

It can be tempting to go after multiple certifications and to seek to be compliant with every buzzword hitting newswires. Consider three simple steps to help prioritize what is best for your company:

1. Hone in on what you are good at. What is your business' core competency? What does your customer require? Do you need to get certified through an accreditation body or does the standard require self-assessed compliance? Does your core competency align with what your customer requires? If not, maybe it is time to reevaluate your customer base.

2. Perform a gap assessment. In some cases, you may be able to do this task in-house or delegate it to a subject matter expert within your company. In other cases, you may need to seek out referrals and outsource it. Look at where you are right now. What steps will it take to get to where you want to go?

3. Be better than you were yesterday. It's easy to get frustrated when you are on the path to becoming certified or compliant. Do not let perfect be the enemy of the good. Keep moving in the same direction, even when the steps seem small and the cost is a factor (it often is!). Recognize that even when you become compliant or certified, the journey is not over.

Over ten years ago, Win-Tech's Founder, Dennis Winslow, said: “I'm not going to do this [AS9100] unless compliance benefits business.” To Dennis, developing processes and procedures compliant with AS9100 to obtain certification had to benefit part quality – not just allow the company to hang a certificate on the wall. To this day, processes and procedures are regularly evolving to ensure customer expectations are met.

Make sure that you maintain your business identity as you walk your compliance path. Commit to certification and compliance within a framework that is meaningful to your business. Establish a game plan and move forward with intent.



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Minimizing Risk When Hiring New Talent

By: Stephen Maule, Partner - McMahon Berger

Many companies are finding it more and more difficult to hire qualified workers in today's economy. To protect themselves from potential discrimination claims brought by those individuals who are not selected, employers must take care to follow applicable guidance concerning acceptable hiring practices.

Employers are prohibited from discriminating against applicants based on their race, sex, religion, age, disability, national origin, and several other protected classifications. Unlawful pre-employment inquiries can lead to an employer being held liable for discriminatory failure to hire. For example, according to the Equal Employment Opportunity Commission (EEOC), pre-employment inquiries are considered illegal if they seek to, or are likely to, elicit a response that requires disclosure of the existence, nature, or severity of a disability. An obvious example of a prohibited inquiry would be "Do you have any disabilities?" The line between lawful and unlawful inquiries, however, can be difficult to determine. Thus, the way the employer asks the question is often the key to determining whether an inquiry is prohibited or allowed.

Subtle yet significant differences in how a question is presented are important. An employer generally is permitted to ask applicants to identify if they will need reasonable accommodations for the hiring process, if they can meet the attendance requirements for the position, and if they can perform the specific functions of the position (after being provided with a description of the duties). Employers may not ask questions, however, that would divulge whether the applicant is disabled, such as "Do you require a reasonable accommodation to perform the job?" or "Can you perform the essential functions of the job without reasonable accommodation?"

Employers also should be careful when asking questions that may elicit information about an applicant's religious beliefs. Permitted questions include "What days are you available to work?" or "Are you able to work with the company's required schedule?" On the flip side, employers should avoid questions such as, "What religious holidays do you observe?"

Any inquiry is unlawful if it is designed to obtain information about an applicant's protected status or it results in a decision being made based on such status. For example, gender-specific questions about pregnancy, family plans, number of children, or marital status, age-related questions such as date of birth or graduation year from high school or college, and national origin inquiries such as where an applicant was born, should be avoided under all circumstances. Instead, focus on job-related questions designed to determine whether the applicant is qualified. For example, determine whether the applicant is available to work overtime on occasion, or if they can travel rather than asking about their family or any childcare needs. Also, confirm the applicant is over the age of 18 rather than asking their age. In addition, request an applicant's current address instead of asking for their birth country.

Another area of concern is the need for conducting criminal background checks. Many states have enacted laws limiting an employer's use of an applicant's criminal background as a factor in making a hiring decision. In Illinois, for example, criminal background inquiries cannot be made until an applicant has been determined by the employer to be qualified for the position. Other states prohibit such inquiries prior to a conditional offer of employment being extended. Regardless of the state in which a company operates, it should not rely on arrests when making a hiring decision and an applicant's criminal history must be reasonably related to or bear upon the duties of the job at issue.

Further, inquiries into compensation history have been restricted in numerous jurisdictions throughout the country in recent years. These laws generally prohibit employers from asking applicants their pay history as revealing such information may lead to a continuation of historically underpaid groups. While employers may not inquire into an applicant's pay history, it remains lawful to ask about salary expectations during the application stage.

Similarly, employers should not inquire into an applicant's credit records, including credit rating,

bankruptcy, etc., unless it is job related. The Fair Credit Reporting Act (FCRA) includes specific provisions governing "consumer reports" used or collected in whole or in part to evaluate an individual's eligibility for employment, promotion, reassignment, or retention as an employee. Employers who obtain such third-party reports must ensure all FCRA steps are complied with when using them for hiring decisions, including obtaining written authorization to secure the report, issuing a pre-adverse action notice, and an adverse action letter.

Another area of focus for employers should be the avoidance of creating an express or implied contract with the applicant. Accordingly, do not make any promises about wages or benefits, moving expenses, employment "for life" or as long as the employee wants to work, or similar statements concerning terms and conditions of employment. An individual could rely on such a representation to support a civil lawsuit alleging the employer breached its "promise."

Finally, it is important that an employer's documentation of its hiring practices is accurate and free of any discriminatory remarks or statements that could be used to establish a claim. Employers should retain applications, interview notes, ratings, and other documentation of individuals not hired in the event they need to establish the decision was based on legitimate, non-discriminatory business reasons. Such documentation should be retained for at least one year pursuant to applicable EEOC guidance.

Given the importance of the hiring process in today's difficult labor market, employers are well-advised to conduct a thorough review of their procedures and practices to ensure compliance with applicable law. Neglecting this aspect of your business can lead to potentially costly issues in the future.

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Emerging Risks & Liabilities from Labor Shortages | Property & Casualty



Labor shortages have become an increasing concern across all industry lines. In fact, a recent study from the Society for Human Resource Management (SHRM) reported that nearly **90% of businesses are experiencing difficulties filling open positions**. Many experts are attributing these shortages to the pandemic as workers are reevaluating their employment priorities.

A depleted workforce can have numerous consequences on your business(es). An employment shortage may make current employees overworked and force you to hire inexperienced or underqualified workers to fill available positions. Combined, these issues can not only increase employee errors but also their likelihood of being involved in on-the-job accidents. As these risks increase your business' liability, it is critical for your organization to mitigate labor shortages and related liability concerns.

Labor Crisis

The initial onset of the pandemic saw a record-high unemployment rate as a significant number of workers lost their jobs. While the economy eventually reopened and job availability returned, many individuals have reassessed their employment arrangements and elected to remain out of the workforce. Recent employment data has revealed that the proportion of people who have been out of work for six months or longer is at its highest in 60 years. In fact, at the end of 2021, nearly 11 million positions in the U.S. were unfilled.

Adding to the crisis, existing employees have begun resigning from their jobs at shocking rates. The U.S. Bureau of Labor Statistics (BLS) has reported that in the latter half of 2021, over 4 million Americans voluntarily left their positions. Termed "The Great Resignation," this trend has only compounded the labor crisis.

How Labor Shortages Affect Liability Risk

Businesses in all sectors risk several liability exposures as a result of widespread labor shortages. Employers are often forced to schedule fewer staff members, overwork current employees and resort to hiring less skilled applicants. Exhausted and underqualified workers can increase the risk of workplace accidents as they're more likely to cut safety corners or make careless errors during their daily tasks.

These incidents could lead to major liability concerns from harm or injuries to both employees and customers. Overworked and inexperienced employees are also more likely to miss important project deadlines and could cause service delays, contribute to disgruntled customers and increase associated liability problems. Additionally, staff shortages may influence your business' capability to maintain adequate workplace security and result in liability vulnerabilities including property and inventory losses.

Manufacturing Industry Risks from Labor Shortages Manufacturing

Experiencing a major labor crisis, the manufacturing sector, as reported by BLS, is currently facing over 800,000 job openings. Regardless of the Biden administration's attempts to foster a new generation of manufacturing workers through allocated federal funding from several executive orders, staff shortages remain a pressing concern.

Manufacturers have also lowered job requirements relating to criminal history, legal marijuana usage, and previous work experience to expand their candidate pool. This change in criteria can, unfortunately, lead to an underqualified workforce and influence an increase in job site accident occurrences and subsequent liability issues. Recent industry research indicates inexperienced manufacturing employees contribute to over one-third (35%) of worksite accidents and related insurance claims. Reports have also discovered that 60% of manufacturing workers have recorded additional stress, muscular pain, and discomfort from being overworked since the pandemic. This is causing industry concern as these incidences can create additional accident risks and related liability concerns.



Steps to Combat Labor Shortages

1. Enhance Recruiting Process

Recruitment efforts can significantly impact your organization's labor shortage. Applicants will judge your company's culture and effectiveness based on their hiring process experience. Recruiters must be creative to keep your organization forefront through the use of strategic social media and job board posts, among other strategies.

2. Increase Pay

Competitive wages can help you retain existing workers and attract top talent. Offering sign-on bonuses may also improve hiring capabilities.

3. Offer Additional Benefits

Employee benefits can also assist in maintaining an ample workforce. Flexible work schedules, remote work capabilities, and paid time off show employees your commitment to their work-life balance. Tuition reimbursement programs can promote continued employee learning, and a 401(k) assists workers to plan for their futures. A generous childcare plan could also attract parents who are conflicted between childcare and work amid unpredictable school and daycare closures. The BLS found an estimated 8.1 million women are out of work, with many experts suggesting this is directly related to childcare issues.

4. Improve Work Environment

A toxic work environment is a common reason for employee complaints and resignations. A healthy workplace demonstrates your commitment to employee wellbeing and can make your organization stand out to applicants. Forbes reported that 89% of employees receiving workplace wellbeing initiatives are more likely to recommend their employer to others. As mental health, stress, burnout and social isolation continue to be major concerns, many candidates are prioritizing work-life balance. Employers must respond to and support their desire for this balance.

5. Reward Existing Employees

Employers can also use rewards and incentives to help retain current workers. These incentives may

include monthly bonuses for top performers or extra discounts on business merchandise (if applicable). You can also encourage and offer opportunities for development and growth. Workers continue to value the growth opportunities and leadership training. Experts suggest that employees who experience a career progression are 20% more likely to remain with their company.

6. Strengthen Retention Strategies

A recent survey conducted by the Society for Human Resource Management (SHRM) found that 47% of HR professionals recognize retention and turnover at their primary workforce challenge. Employee turnover goes beyond a temporary interruption as it can affect morale as employee workloads increase when their colleagues depart.

Retention strategies keep employees motivated, increase loyalty and affect overall productivity. Recommendations include providing mentorship programs, investing in your workforce's career progression, focusing on management's leadership skills, recognizing employee contributions, and creating an overall positive workplace culture.

We're Here to Help

No industry is safe from the effects of the current labor market. Employee shortages can influence multiple liabilities for your organization. Being proactive is the best step in protecting your organization. Connect with a member of our team at <https://www.cbiz.com/insurance-hr/services/property-casualty/contact-us-today/connect-with-a-business-insurance-expert> for additional risk management guidance.

This piece includes excerpts from an article originally published on February 22, 2022, by CBIZ Insights – please read the full article at: <https://www.cbiz.com/insights/articles/article-details/emerging-risks-liabilities-from-labor-shortages-property-casualty>



SALES
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WHY DIDN'T MY NEW INTERNET LEAD BUY IMMEDIATELY?

The Biggest Misconception in Lead Generation

By: Rob Felber – Owner, Felber PR & Marketing

Are leads from pay-per-click, social, or LinkedIn really worth it?

Your business needs sales. Attracting more prospects seems simple enough. In the past, you invested in tactics such as trade shows. You scanned badges and made appointments right on the spot. You were able to show your machinery and products. Maybe you even held live demonstrations in your 10 x 20 rented space. Alas, those days are gone ... at least for the foreseeable future.

So, you are considering new ways to build name recognition and generate leads. You've heard of search engine optimization and maybe have even dipped a toe into pay-per-click. You see the reports (but let's be honest, you do not read them). Then, a few months later someone asks about the investment, and you sheepishly answer that you didn't see any leads that turned into business.

Generating leads is a critical first step... but you will need to dig deeper

I have the lead, now what?

The biggest misconception in lead generation

So, why would a new lead, whether generated by word of mouth or via the internet, be expected to buy any differently?

Way too often we find the single biggest flaw is expecting immediate sales. Yes, you have a new lead, but are they ready to invest in your six-figure machinery or solution?

Most of our manufacturing clients are contract manufacturers. In other words, without a purchase agreement, they are not making your 100,000 custom widgets. Think about your current customer. Did they buy the first time they spoke to your company? Or, did you need to provide estimates, drawings, prototypes, or samples? Manufacturers, especially those with large, complicated sales, do not sell on the first call; probably not on the 6th call either. Many of our customers experience 12, 24 even 36-month sales cycles – nothing has changed except how you received the lead.

You still need to create a relationship, regardless of how you generated the leads

You need to nurture this lead, just as before. You need to understand how they buy and who is on the buying team. So, instead of expecting immediate

results, prepare for the long haul. Plans should include expected return on investment, just as before, however, calculate in months to years, not days.

Selling is a relationship business, and you need to keep that relationship current. How are you communicating now? Are you regularly educating your prospect?

Digital marketing is a great addition to your budget. Remember, you're not selling to statistics. Traffic never moves the needle, leads do. Do not lose sight of the fact that you are selling to real people. Actual humans.

*Want to learn more? Visit www.felberpr.com – or check out some of our great online guides, like *3 Business-to-Business Manufacturing Lead Generation Strategies That Work* at: <https://www.felberpr.com/blog/3-business-to-business-manufacturing-lead-generations-strategies-that-work/>*

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CERTIFICATIONS

The Bottom-Line Effect

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

The following two companies are from the same industry and operate in the same city. Which company would you prefer to own?

The obvious answer is Company A. Even though Company A and Company B both generated \$600,000 in Operating Profits, Company A generated those profits with only half the Revenues.

You may be asking yourself if this type of differentiation between companies happens in real life? The answer would be absolutely; this happens in real life. And while there may be any number of reasons for the differentiation, it has been our experience at EGS that it can be attributed to certifications more than any other factor.

The three certifications that are common to the machining industry are ISO9001, ISO13485 and AS9100.

The principles of ISO and AS9100 provide the framework to build and grow a business because establishing and maintaining a documented quality system increases the likelihood that a company will deliver quality parts, on time. This ultimately leads to customer compliance and sustained customer satisfaction. ISO 13485 is the medical device industry's most widely used international standard for quality management. AS9100 is a widely adopted and standardized quality management system for the aerospace industry. Many major aerospace manufacturers and suppliers worldwide require compliance and/or registration to AS9100 as a condition of doing business with them.

Machine shops that have committed themselves to obtaining one or more of these certifications are rewarded with the opportunity to quote parts for the highly profitable medical device and/or aerospace industries. In fact, a recent study undertaken through the American Society for Quality (ASQ) showed that for every \$1 spent on a quality management system, a company could expect to see an additional \$6 in revenue, a \$16 reduction in costs, and a \$3 increase in profits. On average, they saw that quality management reduced costs by 4.8%.

The two companies were from the same industry and operated in the same city. Company A possessed all three certifications. Which company would you prefer to own?



	<u>Company A</u>	<u>Company B</u>
Revenues	\$ 3,000,000	\$ 6,000,000
Cost of Good Sold	1,350,000	3,600,000
Gross Margin	1,650,000	2,400,000
Operating Expenses	1,050,000	\$ 1,800,000
Operating Profit	\$ 600,000	\$ 600,000



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Source: Grainger Consulting Services

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