

THE RECORD

Published by the National Tooling and Machining Association

INSIDE THIS ISSUE

Building An Integrated Marketing
& Sales Function Based on Rigor
and Buyers — pp 18-19

Creating a Sales Pipeline
for Your Shop — pp 22-23

and so much more ...

SALES & MARKETING NEW DAY NEW TACTICS

(Long-range Supersonic Fighter, the F-35 — pp 20-21)



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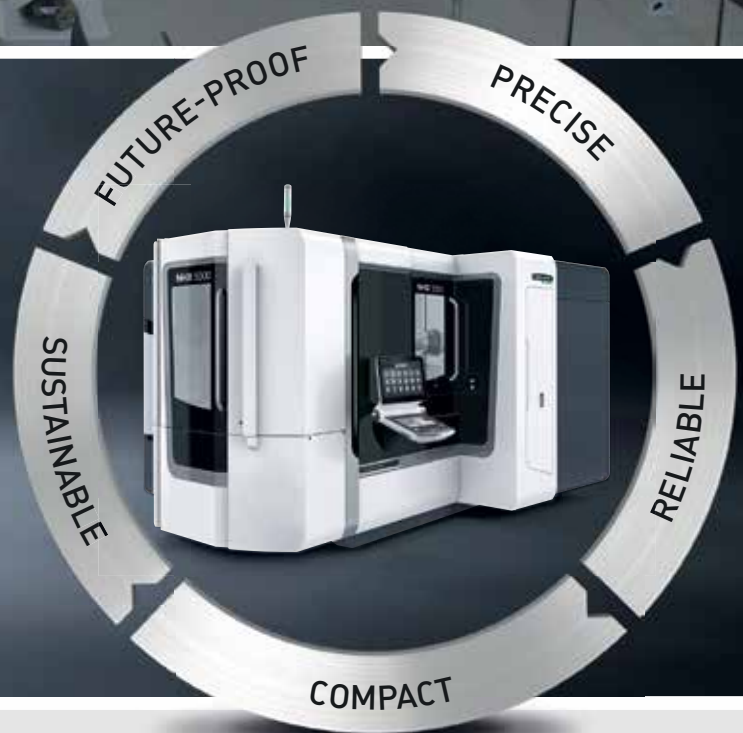
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SEND US YOUR STORY

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 editor@ntma.org or call 800.248.6862.

FUTURE THEMES

May 2023: DEI...
Is Coming, Ready or Not

June 2023: Supply Chain...
is Your Chain Linked?

July 2023: Emerging Leaders 2023



UPCOMING NTMA EVENTS

MFG 2023

April 26-28 | Phoenix, AZ

International Technology Tour 2023

May 6-12 | Germany & Switzerland

Engage 2023

October 18-21 | Indianapolis, IN



PRESIDENT'S UPDATE

What a Perfect Time for This Month's NMTA Record Focus: Sales/Marketing... **New Day, New Tactics.**

As we have begun 2023, it's clear we are in a post-COVID environment. Many of us spent 2022 putting our processes back in place, or maybe putting new processes in place. Disruption, whether planned or unplanned, has always provided an opportunity to re-assess processes and procedures.

I realize many are well on their way in their post-pandemic journey, while others are still struggling with the process. While many of the processes that we have worked to improve and change have been internal, many of us struggle with one of the biggest external changes/challenges and that is sales: growth/sales, diversification/sales, marketing/communication.

Personally, multiple times during my career I was faced with similar challenges with sales. The difference from then to now is that we did not have the National Tooling and Machining Association (NTMA) partners available to help us overcome the challenges. We just worked harder among ourselves to overcome the challenges. While I'm proud to say we always did overcome our obstacles, a little help and expertise from trusted sources would have most likely made our path easier and maybe even more productive. When it's you against the world, you work to survive instead of perhaps working strategically for what would enhance and support your company's ongoing efforts.

Knowing our NTMA members have overcome many challenges that come their way in business and that they have endured the largest unplanned disruption of our careers (the pandemic), we, your NTMA National Staff, have focused on how we could better support our members to overcome the sales challenges caused by the pandemic.

Our focus and goal has been to find outside partners who would commit to helping and supporting NTMA, at reduced costs to our members. I'm proud to say we found them and some found us, but either way, it's a win for all who had or have a sales need.

I know some of you are familiar with our partners in the sales/marketing area, while others may not be aware of those in our network. The partners listed here are all ready to help you.

FACTUR – Lead Generation/Outsourced Prospecting and Growth Management – gabe@bethefactur.com

EBITDA GROWTH – Profitability & Performance Management – dave@ebitdagrowthsystems.com

PAPERLESS PARTS MARKETING – Social Media Marketing – Annemarie.tracey@paperlessparts.com

THOMAS NET – Nation's leading On-Line Platform Connecting Buyers & Sellers – cmula@thomasnet.com

CONNEX MARKETPLACE – Industrial Platform that Connects US Manufacturers & Suppliers – alan.davidson@connexmarketplace.com

SYNCFAB – Connecting Suppliers to Vetted RFQ's based on Capability & Capacity – dennis@syncfab.com

NFFS ICON – On-Line Portal to the DLA, Sourcing from DOD for Machining & Castings – sheila@nffs.org

Not only have these sales & marketing partners helped many of our members over the past two years, but our increased VOICE in the manufacturing industry has also caused OEMs needing

manufacturing support to contact NTMA direct for supplier recommendations. This has paid off for some of our members who met the requesters' criteria. These partners are offering below-market pricing to NTMA members only. As the old saying goes, "two heads are better than one." If you are challenged, "**New Day, New Tactics**" may be for you. There's nothing to lose in reaching out to industry experts for help.

Remember, success in sales is not always about needing more sales; it might also be about replacing those non-contributing customers. As I was always told, the best time to get new customers is when you are busy so you can pick and choose the work you want, versus being forced by a downturn to seek new customers at a time of desperation and panic.

As I close this article about sales/marketing, remember that everything I said and/or suggest comes with the premise of **competitive pricing, on-time delivery, and a quality product** as a given. Without these three absolutes, you will forever chase your tail, and wear yourself and your employees out. It will continue to be all about survival rather than being all about success. Let's focus on SUCCESS.

NTMA continues to grow, I ask each of you to use your industry influence with your peers to help grow our Chapter/National Membership. Our goal is "**Advancing Manufacturing's Future.**"

Roger Atkins, President – NTMA

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NEW MEMBER HIGHLIGHTS

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Accu-Tool is an AS9100D and ISO 9001:2015 certified precision CNC machine shop that specializes in prototypes and low to mid-volume production for OEMs across the country. We also have experience working with a variety of customer specific quality systems. Since 1982, we have provided solutions and quality parts to leading medical, aerospace, semi-conductor, robotics, pharmaceutical, electronics, research and development companies, as well as universities. We have a total of 22 employees and operate under 24,000 square feet of space. At Accu-Tool, our mission is to meet or exceed our customers' expectations for quality. We believe excellence in quality starts with a commitment to fully understand our customers' requirements and needs. Our capabilities include 3, 4th, 3+2 axis CNC milling with additional capabilities of CNC Mill/Turn, Wire EDM, bead blasting and grinding. We machine all the traditional types of material, and we also have significant experience machining high temperature metals such as Molybdenum and Tungsten.

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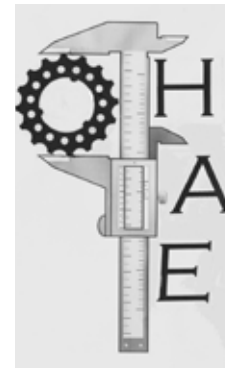
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HERTIG APPLIED ENGINEERING LLC

Arizona Chapter



Hertig Applied Engineering is a new small CNC milling shop focused on smaller components. We leverage both cutting edge technology and experience gained in aerospace and semiconductor industries to solve our customers' problems. We will continue to add capability in the near future (5-Axis, automation) and are excited to be among such great companies in the NTMA.

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XCELICUT

Pittsburgh Chapter



Established in 2019, Xcelicut is a contract machine shop focused on medium volume production turning. We are located in Latrobe, PA and serve customers in a variety of industries including defense, heavy equipment, electrical infrastructure and more. At Xcelicut, we specialize in utilizing simple automation to manufacture complex turned parts. Our lathes feature sub-spindles, live tooling, bar feeders, and cobot machine tending systems to maximize efficiency by completing parts in a single operation with minimal manual effort.

Our team is made up of highly skilled machinists who are bound by a shared passion for continuous improvement and process optimization. Every day before the machines are turned on our team is given time to focus on organizing and improving their workspace. This culture of improvement drives everything we do from how our shop is laid out to how we program our parts and allows us to provide our customers with high quality parts at a great value.

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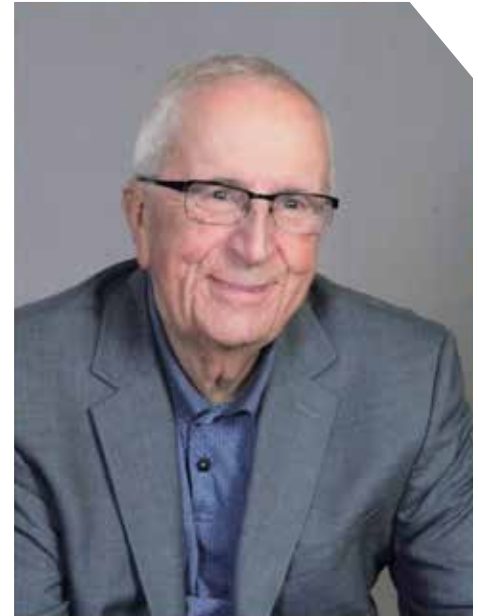
Past NTMA Chairman, Bruce Bolton Phelps, passed away Tuesday, February 28, 2023. He was born March 20, 1925, in Delta, Ontario to Warner and Mary Bolton Phelps. Bruce was a veteran of World War II, serving as a Sergeant in the Royal Canadian Air Force. He came to the United States in 1947 and on June 17 of that year, he married Barbara Dixon at the Bowens Corners United Methodist Church.

Bruce was employed at Sealright as an estimator for Black Clawson until he and two of his business partners established Fulton Tool Company, Inc. in 1959. Bruce was still actively involved in the daily operations of his business 12 days prior to becoming ill.

Bruce was always grateful to the City of Fulton for the success he enjoyed as a business owner. He was a very giving and kind man who expressed his gratitude by serving on many committees to help improve the

lives of others. He was the National Past President of the National Tooling and Machining Association in 1985 and served many other civic organizations. He was an Airport Commissioner, a board member of the finance committee and administrative council at the First United Methodist Church of Fulton, the City of Fulton Planning Commission, a board member of the American Red Cross in Fulton, the Fulton Chamber of Commerce, the Oneida National Bank Board and Catholic Charities.

He also served on the board of the Cornell Co-Op Extension, Catholic Charities, the Oswego County Private Industrial Council, Oswego County Industrial Development, the City of Fulton Downtown Revitalization, the BOCES Committee on Machining, the Oswego & Fulton Hospital Boards, Operation Oswego County, the Onondaga & Oswego Counties Tooling and Machining Associations, the Oswego Industries board, and Operation Oswego County.



Bruce Bolton Phelps - Former NTMA Chairman

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DATANOMIX AND HEXAGON ANNOUNCE AGREEMENT TO BRING REAL-TIME FACTORY ANALYTICS TO INDUSTRIAL MANUFACTURERS WORLDWIDE

Hexagon's Manufacturing Intelligence division selects Datanomix for its No Operator Input™ approach to production monitoring and out-of-the-box data automation.

Datanomix, maker of the industry's only Automated Production Intelligence™ software platform, announced a partnership with Hexagon to offer the Datanomix software solution to its global manufacturing customers. Datanomix is well known for its industry-changing No Operator Input™ approach to production monitoring, which removes the common challenges and complexities companies face when deploying production monitoring solutions. Precision manufacturers looking to improve production efficiency, increase utilization, optimize cycle times and increase part margins will benefit from the automated reports and insights that Datanomix provides.

The Datanomix platform delivers industry-leading innovation for manufacturers who have been let down by the complexity and lack of insight from prior generation monitoring systems. Simply by connecting directly to manufacturing equipment, Datanomix provides automated benchmarks and scores of production performance, and delivers real-time and over-time insights that drive morning Gemba walks, shop floor problem solving, and continuous improvement initiatives. All of this is done through its unique No Operator Input™ approach, which eliminates the need for data entry or data crunching of any kind.

Through the new partnership, Hexagon's customers will be able to access the Datanomix solution more easily. The two companies will also begin a journey of joint development and integration of new data sources that visualize larger and larger segments of manufacturing processes, enabling business leaders to zero in on untapped layers of efficiency in their operations.

"It is an honor to be selected by a manufacturing technology powerhouse to offer its customers our production monitoring software," said John Joseph, Co-Founder and CEO of Datanomix. "The highly respected Hexagon brand is present in nearly every manufacturing facility we visit and represented by a salesforce that has decades of

trusted technology deployment experience. Equally important is the adjacency of various Hexagon data sources that will provide new digital fuel to build a larger picture of real-time production KPI's for our customers. Automating production intelligence is a comprehensive vision we have that starts with productivity, and expands to other critical dimensions around the machine, parts, tools, and quality, among others."

As part of its reseller enablement program, Datanomix will train Hexagon's customer-facing teams on selling, installing, and supporting its offerings. Hexagon will offer the Datanomix solution directly to its customers as an integrated component of its Production Software portfolio.

"After evaluating a cross section of machine monitoring products on the market and then seeing the Datanomix software in action, we quickly realized that their approach to automated production intelligence— benchmarking of production KPI's, autonomous reporting and continuous improvement guidance – clearly sets them apart from simple monitoring products," said Chuck Mathews, General Manager of Production Software for Hexagon's Manufacturing Intelligence division. "The no operator input approach they've taken is what the industry has been waiting for in this space. Our salesforce is excited to bring this new technology to our customers, and the Datanomix platform is a natural fit for Hexagon's data integration strategy."

"The alignment between Hexagon's vision for autonomous manufacturing and the Datanomix vision for simple, automated production insights made this partnership very compelling for us," said Greg McHale, Co-Founder and CTO of Datanomix. "Manufacturers are looking for digital leverage in everything they do— more insight, more value, and more productivity without the headaches of data crunching and complicated workflows. This relationship allows us to bring that capability to broader audiences that are hungry for insights and tired of the old way of doing things."

Hexagon will offer the Datanomix solution to its North American and European customers as part of its comprehensive solutions for machine shops in the coming months. The companies plan to make announcements about additional technology integrations subsequent to their launch.



ABOUT DATANOMIX

Datanomix delivers Automated Production Intelligence™ for discrete manufacturers with No Operator Input™ required. Its core product set includes its flagship Production Monitoring system, along with Digital GEMBA Boards, and Condition Monitoring systems. Based in New Hampshire, Datanomix exists to provide manufacturers with out-of-the-box reports and workflows that align with the way manufacturing people already work without the need for manual data crunching or workflow disruption. Learn more at www.datanomix.io and follow us @DatanomixInc



ABOUT HEXAGON

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Our technologies are shaping production and people related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future. Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagon.com/mi.

SIROIS TOOL MAKES HISTORY: ONE OF TWO CONNECTICUT COMPANIES SIMULTANEOUSLY CHAIRING NATIONAL MANUFACTURING INDUSTRY ORGANIZATIONS

By: Alan Ortner - CEO, Sirois Tool Co. Inc.

For the first time in history, leaders of Connecticut companies simultaneously chaired two of the nation's most prominent manufacturing industry organizations. In 2022, Marion Manufacturing President Douglas Johnson was named chairman of the Precision Metalforming Association (pma.org), while Sirois Tool CEO Alan Ortner chaired the National Tooling and Machining Association (NTMA.org).

The NTMA represents over 1,200 tool & die and precision manufacturing companies, accounting for more than \$35 billion in annual sales. The PMA, which represents the \$137 billion metalforming industry of North America, has more than 920 member companies.

Johnson's one-year term as PMA chairman will end in 2023, while Ortner completed his two-year term as NTMA chairman in December 2022. Ortner continues to serve on the board of directors for NMTA and is also on the board of Advanced Manufacturing Practice and Education Development (AMPED). Sirois Tool HR Manager, Cheryl Huck, serves as vice president and chair of Programs and Events for the Connecticut chapter of NTMA (ct-ntma.org).

"Supporting industry organizations has always been part of our culture at Sirois Tool," Ortner says. "You have to invest some time, but it's time well spent." Johnson also has a long history of supporting industry organizations. He met Ortner when they served together on the board of the New England Spring and Metal Stamping Association about 10 years ago, and the two have collaborated to support manufacturing – locally and nationally – ever since.

Johnson says he and Ortner have the local PMA district and the local NTMA chapter communicating with each other "at a much higher level" than in the past, talking more about what they can accomplish together.

“

Your industry colleagues understand your pain points, and they're eager to share solutions that have worked for them. If you're thinking of making a capital investment, you'll have a whole network of peers to discuss options with. And sometimes," he added, "you can unknowingly make history.

"There is power in numbers," Johnson said. "When you put the two associations together, we are a much bigger force."

The PMA and the NTMA's combined One Voice (metalworkingadvocate.org) federal government advocacy program is an example of their combined strength. Designed to promote government policies that work to ensure a strong manufacturing sector in the US, it represents nearly 2,500 metalworking companies.

Johnson and Ortner encourage other company leaders to get involved with industry organizations, at the very least, locally.

"Networking with other companies in your industry helps you and your business in so many ways," Ortner says. "Your industry colleagues understand your pain points, and they're eager to share solutions that have worked for them. If you're thinking of making a capital investment, you'll have a whole network of peers to discuss options with. And sometimes," he added, "you can unknowingly make history."



ABOUT SIROIS TOOL

Headquartered in Berlin, CT, Sirois Tool (siroistool.com) is an AS9100 certified manufacturing company that provides precision tooling, jigs, fixtures, gages, and precision machined parts and assemblies for specialty machine manufacturers and several other industries. Business units include Dow Gage and North American Spring Tool.



Alan Ortner – CEO, Sirois Tool



Douglas Johnson – President, Marion Manufacturing



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WHY DOMX INSERTS CAN TRANSFORM YOUR ROUGH & MEDIUM TURNING OPERATIONS

By: Marco Morgado - Director of Global Sales, Pilot Precision Products



Images courtesy of Palbit



Heat Resistant Superalloys (HRSA) are highly dense metals that have poor machinability characteristics and well-suited to heavy roughing insert applications.

Heat Resistant Superalloys (HRSA) are highly dense metals composed of nickel (Ni), iron-nickel (Fe2Ni) including nickel steel or stainless steel, cobalt (Co), and chromium (Cr) that can be used at temperatures up to 70% of their melting points ranging from 1900°F (1050°C) to 2200°F (1200°C). Although HRSA resistance to corrosion and heat make them ideal for applications in aerospace, defense, general machining, marine, medical/biomedical, oil and gas, petrochemical, and power generation, they generally have poor machinability characteristics.

That reality is due to those materials' high hot hardness and strength, high dynamic shear strength, lower thermal conductivity, formation of built-up edge, austenitic (NiCr or NiFeCr) matrix, hardening during machining, and abrasiveness. In continuous cuts, manufacturers typically use ceramic inserts for roughing because of their hardness. They can cut faster than carbide inserts. However, ceramic inserts, do not have the toughness required to handle corners or interrupted cuts, which is far from ideal when used to rough-machine HRSA.

To provide manufacturers with a more efficient way to machine HRSA, Palbit, SA, a Portugal-based vertically-integrated manufacturer of carbide tooling, developed DOMX heavy roughing inserts. Last year, Pilot Precision Products became the exclusive US master importer of Palbit carbide cutting tools.

For good measure, the letters D, O, M, and X are taken from the ISO Insert Designation Chart. **D** corresponds to the insert's shape (Rhombic 55°); **O** is the Clearance (relief angle) designation which,

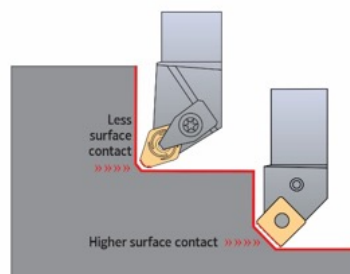
in this instance is "other" to signify a new design not reflected in letters A-G, N, and P; **M** denotes the Tolerance Class (nose height, inscribed circle, and thickness in millimeters), and **X** symbolizes the insert's geometry (special design).

DOMX ESSENTIALS



DOMX inserts are #4 size. They are made of solid carbide, come in a single size, are PVD-coated, and ideal for medium to rough turning of HRSA

DOMX inserts are #4 size. They are made of solid carbide, come in a single size, are PVD-coated, and ideal for medium to rough turning of HRSA because they combine high hardness with superior heat resistance properties. A DOMX insert features four positive cutting edges on a double-sided negative insert and can improve cycle time reduction to varying degrees and tool life up to 140%.



DOMX goes into corners better and faster than alternative tooling and finishes the cut without "blowing up" like ceramic inserts.

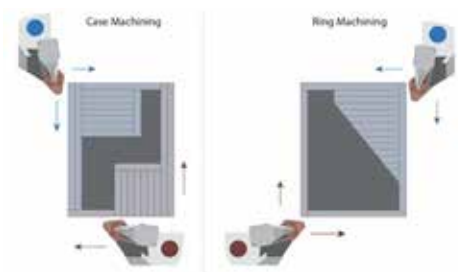
DOMX chip breaker geometry allows DOMX inserts to provide the same impact as a high feed insert but with a lower amount of surface contact to minimize head and cutting pressure. As a result of that design

feature, DOMX can take a heavy cut and generate low amounts of heat generated in the cut, allowing the insert and the workpiece to retain their respective shapes and properties.

DOMX goes into corners better and faster than alternative tooling and finishes the cut without "blowing up" as ceramic inserts tend to in HRSA machining because they lack toughness and get overheated when used at variable speeds. What's more, ceramic inserts are generally 5 to 10 times more expensive than carbide ones, so using them for HRSA machining can add up quickly.

To put it another way, using DOMX inserts give you the option of using high-speed, high-feed roughing in a single-pass operation. Specifically, DOMX inserts allow a 45 degree lead angle of the insert to produce a higher depth of cut in rough or medium turning applications. The advantages of using DOMX include cycle time reduction, tool life improvement, and stability in the roughing process.

DOMX inserts can be used for facing, external or internal turning, case machining, and ring machining as this illustration shows.



DOMX inserts can be used for facing, external or internal turning, case machining, and ring machining.



DOMX is a patented insert design and must be used with Palbit's proprietary right- or left-hand holders.

As for toolholders, DOMX is a patented insert design and must be used with Palbit's proprietary right- or left-hand holders.

TOOL SETUP TIPS

To achieve the optimal setup for your application, the lead angle should be as close as possible to 45 degrees based on the shape of your workpiece. By creating a 45 degree lead angle, you can increase tool life by 30% or more. A 45 degree lead angle also increases cutting force, improves rigidity, and reduces deflection. Although chatter or tool deflection may occur, you'll likely experience higher material removal rates and increased productivity.

By performing calculations, yourself or with assistance, you can determine the largest possible

radius for dispersing the effects of cutting forces, reducing notch wear, and decreasing the probability of insert breakage.

With so many variables involved, an engineering conversation is likely to be necessary before you decide whether DOMX inserts are best for your application. The Palbit/Pilot team is ready to help you obtain and analyze accurate technical information so efficiency and cost-effectiveness can transform your HRSA turning operations.



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CUTTING CHINA LOOSE: CONFIDENCE HAS BEEN SHAKEN

By: Harry Moser - Founder and President, Reshoring Initiative

Public sentiment about manufacturing in China has plummeted to a new low. “Confidence has been shaken,” according to a study conducted by the American Chamber of Commerce in Shanghai (AmCham). The number of US companies that cut their investment in China nearly doubled in 2022 (19%), compared to 2021 (10%). The report concluded that the impact of COVID-related shutdowns in China, travel restrictions, and supply chain disruptions amid strained US/China relations and macroeconomic pressures eroded business certitude, leading to lower investment. As investments drop, Chinese growth will slow, making it an even less attractive market.

“

The supply chain challenges of the past year have demonstrated the importance of increasing our domestic manufacturing capacity as quickly as possible.

Additionally, a 2022 US-China Business Council (USCBC) poll of member companies found that 21% of respondents said they were “pessimistic or somewhat pessimistic about their five-year business outlook” in China compared with 9% in 2021. Respondents of another AmCham study said that their headquarters’ confidence in China’s economic management worsened over the last year (52%). Only 18% of companies ranked China as their top choice for global investment plans, down from 27% in 2021. And 56% reported that China’s government policy shows favoritism to local companies, up 5% versus 2021 and the highest level since 2017.

Tech behemoth Apple Inc. is rethinking supply chains and pushing contractors to manufacture elsewhere, citing factory violence and turmoil from COVID lockdowns and increased monetary, social, political, duty/tariff, and reputation risk. Bloomberg reports Apple is expected to buy US-made microchips, reshoring about one-third of its future processors, according to a Computerworld article.

Misha Govshteyn, CEO of Houston-based contract manufacturer MacroFab, punctuated the sentiment, telling Chief Executive, “Things have changed pretty dramatically post-pandemic. China used to be the default for manufacturing electronics, but the answer now is, anywhere but China.” France-based Schneider Electric, a manufacturer of energy management and automation equipment has chosen El Paso, Texas for a new manufacturing plant to boost domestic manufacturing capacity.

“The supply chain challenges of the past year have demonstrated the importance of increasing our domestic manufacturing capacity as quickly as possible,” said Annette Clayton, CEO and president of Schneider Electric North America. Furthermore, Wauconda, Illinois-based Domeny Tool & Stamping is doubling production of specialty steel stamping used in auto brake cylinders. Domeny’s Tier 1 auto customer is reshoring some of its worldwide sourcing due to supply-chain snarls. “For the first time in 25 years, we’re in a period of growth,” Steve Smith, executive vice president, told Crain’s Chicago Business.

Overall, China is the source of 44% of reshoring, cumulative from 2010 to 2021. In 2021, the private and federal push for the domestic supply of essential goods propelled reshoring and foreign direct investment (FDI) job announcements to a record 261,000, bringing the total jobs announced since 2010 to more than 1.3 million.

To date, more than 40 new semiconductor ecosystem projects and \$200 billion in private investment have

been spurred on by the CHIPS and Science Act of 2022, reducing dependence on critical technologies from China.

“Made in America” policies have spurred investment in the domestic manufacture of electric vehicles (EVs), batteries, and EV chargers. As of this writing, companies have invested nearly \$85 billion. Manufacturing in the United States makes good business sense. Scott Keogh, former president of Volkswagen of America, told NPR, “It’ll be a dramatic, dramatic help having the supply chain localized, having the car here and, frankly, just having enough production slots.”

Support for reshoring is driven by increased recognition of the total cost of offshoring and rising concern over US dependency on China. The savings on non-manufacturing costs that result from producing in the market in which the products will be sold can often overcome a 15% to 20% manufacturing cost gap caused by a 70% wage gap.

Using the Total Cost of Ownership Estimator instead of manufacturing cost or free on board (FOB) price when companies make siting and sourcing decisions is the best way to recognize these savings. For help, contact Harry Moser at harry.moser@reshorennow.org.



For help, contact Harry Moser at harry.moser@reshorennow.org.



For more information, please contact

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

Applications and self-assessment documents can be found here:

<https://ntma.org/resources/ntma-awards>

Applications should be sent to 6Saward@ntma.org

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

HOW IT WORKS:

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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:

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

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TOOLS FOR SCHOOLS: DEVELOPING THE NEXT GENERATION IN MANUFACTURING

By: Tom Wyatt - Chief of Staff at HEIDENHAIN

STEM opens up a world of possibilities for your students. Our goal is to help develop the next Generation of manufacturing professionals in the field of motion control and to empower students interested in the precision metalworking field by offering the latest and best technology available today.

ACU-RITE digital readouts and easy-to-use computer numerical controls (CNC) have been made in the USA for more than 40 years and have long been the first choice of machine tool/metalworking instructors across the country.

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Our forte is turning your used or new manual milling machines, lathes, grinders, and electrical discharge machines (EDM) into a productive tool that's ideal for preparing your students for their futures in the manufacturing industry.

We have just added the droPWR iOS app to the readout line. droPWR turns an iPad® into a digital readout taking your machine tool experience to the next level (iPad® not included).

Also new to the line is the Bridge Adaptor Kit, which simply put, bridges the gap between ACURITE and HEIDENHAIN controls.

Education of our young adults is very important to ACU-RITE as well as the parent company, HEIDENHAIN. This is why we are prepared to offer

high-discount incentives to all technical schools across the country. Discounts start at 25%, including special hands-on training incentives. STEM is at our core!

We invite you to take a look at the ACU-RITE website and view a few videos that we recorded at schools we have partnered with, including Randolph Community College in North Carolina and Horry Georgetown Technical College in South Carolina.

From basic to advanced, ACU-RITE and HEIDENHAIN are your partners for growth. The future of advanced manufacturing is the TNC7 from HEIDENHAIN. This CNC control offers an outstanding user experience and puts new possibilities at your fingertips that are intuitive, task-focused and customizable. 5-axis machining has never been this easy!

HEIDENHAIN Technical Training Academy offers three classes per month. You can view our schedule online here. Topics include an introduction to the digital manufacturing process, tool preset station, CAM software, machine and process monitoring and in-process inspection.

HEIDENHAIN Education Support Program (HESP) from HEIDENHAIN promotes NC training in the metalworking industry, with a focus on milling and turning. This support is available to vocational training institutions, state vocational schools, universities, and apprentice training programs.

THE SUPPORT INCLUDES:

- Programming stations for milling and turning
- Training courses for teachers and trainers of CNC apprentices
- HIT multimedia training system for interactive learning

- Training kit that explains high-accuracy encoders
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We would also like to introduce the HEIDENHAIN Technical Training Academy. We offer three classes per month. You can view our schedule online.

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Building An Integrated Marketing & Sales Function Based On Rigor And Buyers

By: Ed Marsh - Founder & Principal, Consilium Global Business Advisors



Everyone reading this article is a buyer and a seller. Personally, for sure, and professionally in some capacity. We've all changed the way we and our organizations buy, and we've seen the signs and symptoms of changes how our prospects and customers buy. It is a new day (actually couple decades since the internet and email became business staples) that calls for new tactics.

Yet tactics might not be a big enough term. While changes in buying habits parallel the radical transition from a mill and lathe to a state-of-the-art machining center, the corresponding changes in most companies' marketing and sales are more akin to small improvement of improving tolerance from hundredths to thousandths. Companies have massively improved their manufacturing operations' quality and output with technology, process engineering and rigor.

They must now do the same to their revenue growth.

Five Building Blocks For Re-Engineering Revenue Growth

Doing so requires five important steps:

1. Incorporate a process engineering and precision mindset into the company's marketing and sales function
2. Integrate marketing and sales to create buyer experiences rather than observe vestigial silos
3. Reject sales mediocrity and embrace excellence
4. Use technology to improve output, quality and efficiency in revenue growth
5. Take a zero-based budget approach to marketing, sales and technology resource decisions

Let's look at each in detail.

Process Engineering And Rigor

Your operational excellence is the product numerous decisions, each building on an original commitment to improve through observation, measurement, experimentation, and iteration. Processes are developed, improved, rigorously followed, and improved further.

Compare that, for example, to how trade show leads are managed. There's often uncertainty over who enters them into the CRM and when; how they're assigned; when the first contact must be made; how many contact attempts are expected; what qualification criteria will be applied; whether they'll be added to marketing campaigns even if they're not an immediate fit, and more. That's just one small segment of the revenue growth value chain – there are hundreds more.

Buyer Experience Vs. Departmental Responsibility

Buying teams are growing (>10 people on average), buying cycles are longer, committee decision making more common, and aversion to sales rep engagement is growing. While sales remains a critical role, much of the sales process is now executed indirectly through engagements normally in the domain of the marketing team. Your traditional structure probably frustrates buyers.

Embrace Excellence In Sales

Sales isn't a black box. While you can't put a micrometer on a rep, you can measure not only



performance by quota, but also critical sales skills with 93% predictive validity. This allows you to personalize training, put reps in the right roles for their skills, and recruit with confidence to hire 2nd & 3rd standard deviation talent.

Leverage Technology

Technology undergirds every aspect of your manufacturing operation, and it's accelerating in both hardware and software segments. Yet on the revenue growth side there's probably only a CRM with problematic adoption, some website content management system, and maybe some marketing email.

A proper marketing and sales tech stack costs more than you've ever considered spending, and when properly configured and in the hands of the right team of marketing and sales folks, it drives efficiency and effectiveness and helps create experiences that buyers appreciate. It's also a critical component of your ability to accurately measure every aspect of your process to inform the incremental improvement of revenue growth just as you've done in manufacturing.

Adequately Resourced

If 50-70% of the buying journey occurs virtually before prospects are inclined to reach out to sales reps, and if technology is critical to the required architecture, then you'll need to adapt your org chart and budgeting. Top companies spend 5% of revenue on marketing. Your staffing ratio will likely be 1/3 marketing to 2/3 sales, with sales shifting to include inbound sales, business development, and sales operations roles in addition to the traditional field sales model.

Finally, customer service must evolve from fielding requests and issuing confirmations to a function that integrates its own marketing and salesmanship.

A Significant Challenge And Opportunity

This is neither a simple nor an easy transition. It will challenge deeply held beliefs at the core of many corporate cultures. Many on your team will argue vehemently and resist actively. And they'll be sincere.

Imagine the angst of a VP of Sales whose stature in the company, self-image and outlook are all based on an outdated model. And when that person is a long-time loyal employee and maybe even a family member, it's a significant challenge.

The good news is you have a playbook. Companies like yours faced an almost identical transition in the core functions of your business as technology and manufacturing process engineering emerged a couple decades ago. That was painful, but in retrospect necessary and appropriate. And companies that moved quickly established strong competitive advantage.

That was in response to buyers' expectations then. Today their expectations again demand change. And the reward is predictability of business and further competitive advantage.



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Tech, Policy, Economic, and Demographic Intel for Manufacturing Leaders

By: Bonnie Gurney, Vice President, Strategic Partnerships

Get forecasts and insights that address how economics, demographics, government policy, and emerging technologies will impact manufacturing business, and enjoy networking events, championship golf, horseback riding, and more at MFG 2023, powered by AMT and in partnership with NTMA, April 26-28, in Phoenix, Arizona, at the Sheraton Grand at Wild Horse Pass.

Focused on the theme, Manufacturing for Growth, MFG 2023 is a unique meeting experience that provides unparalleled opportunities for executives of companies that make, sell, service, and use manufacturing.

Why Attend?

"The face-to-face networking opportunities help me keep in touch with people I may not see in my normal business routine," says Markus Stolmar, president and CEO of UNITED GRINDING North America. "The MFG meeting is a great source for economic trend data, and it's delivered in an easily digestible format."

"The information shared at MFG helps us serve our manufacturing partners and clients because it provides an opportunity to learn about industry trends," says Anita Colvin, senior vice president and general manager for manufacturing vendor services at U.S. Bank, a past attendee and sponsor for MFG who will be attending again this year. "U.S. Bank

sponsors MFG to make sure this event continues for years to come."

Factory of the Future and the Importance of the Supplier Base

Discover how the factory of today becomes the factory of tomorrow with the entire value chain from Nick Bullen, chief engineer for advanced manufacturing technology at Northrop Grumman Corp. and Tim Shinbara, CTO at AMT.

Washington's 2023 Manufacturing Agenda

From taxes and tariffs to regulations, workforce, and America's Supply chains, Omar Nashashibi, co-founder and partner of The Franklin Partnership, and Caitlin Sickles, partner at the Policy Resolution Group at Bracewell LLP, will present the latest policy developments from the nation's capital and how they may help you grow your business.

Demographics

Ken Gronbach, president and CEO of KGC Direct, will present "Demographic Strategies for the Post Corona Era." He'll examine China's announcement about its dropping population and how it's going to

open unprecedented opportunities in North American manufacturing for the next couple decades.

Economics

Keynote speaker Alan Beaulieu, Ph.D., president of ITR Economics, will present "Gauging the Risks Going Forward 2023 – 2024." Beaulieu will provide a data-driven analysis of the trends to show what to expect for key industries in manufacturing, such as the supply chain and commodity pricing.

All Work and No Play? Not at MFG!

With an agenda full of industry trends and outlooks, you'll want to balance absorbing all this business intelligence with some fun! Held at the Sheraton Grand at Wild Horse Pass, the MFG Meeting offers a variety of activities to enjoy and relax. Explore the championship golf course, themed swimming pools, equestrian center, boating, casinos, and more. The venue also features Aji, a Native American-owned, Forbes Five-Star spa, reflecting the traditions of the Pima and Maricopa cultures.

For more details about MFG 2023 and to register to attend, visit [MFG Meeting 2023.com](https://www.mfgmeeting2023.com).

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Creating a Sales Pipeline for Your Shop

By David Capkovitz, EBITDA Growth Systems

In your shop, you know how to make chips. That is the focus and center of your business. Knowing how to make a thing well isn't the only thing needed to success in business. The question that we need to address is, do you know how many chips and what kind of chips are going to pay the bills and give you enough money to support your employees, your family, and your life goals?

As shop owners, should we trust the hundreds of people who message us on LinkedIn offering to do marketing for us? Do we answer the "restricted" phone call that is going to bring all the success you hope to achieve? Do you hire someone who says they are a top-notch salesperson? Do you subscribe to the service that is going to bring you all the leads you ever wanted? Maybe... But before you do any of this, EBITDA Growth Systems believes that you need to build a proper process.

The process should give you a clear picture of what kind of work you need to bring in, expected lead times for that work, and how much work you should accept in a given time period. Without first determining this, you are setting yourself up for missed deadlines and deliveries, greatly increasing stress on your organization. We have all felt the pressure of having too much to do and not enough time to do it. We all know the feeling of having to call a customer and give them bad news (hopefully before the due date) and the look in the employees' eyes when you need them to work some "last minute" overtime. None of these feelings are good for you or your checkbook.



So how do we build a sales process that sets us up for success?

► Step 1

WHAT IS A SALES PIPELINE?

A Sales Pipeline is a structured view of quotes, the probability of those quotes coming to fruition, when you expect the quotes to turn into purchase orders, and when those jobs will be delivered to the customer. This seems like a tall order. How do we definitively know this information? The answer is that you do not know for sure, but you need to engage with your customers and keep a pulse on your quotes. The follow-up process is critical to your sales success. It is important to know that these are estimations, and the probability level needs to be the best guess based on conversations with your customer. With this informational structure, you can see “best guess” scenarios and actually do some sales planning. This holds sales forces together and gives you direction on where and when to push for sales.

► Step 2

KNOW WHERE TO GO TO GET SALES LEADS.

Where do you get sales leads? You obtain project leads from two places, your existing customers, or new customers. We all know how to get in touch with existing customers, so how do we get leads with new customers? There are three ways to do this.

1.) Do your research on companies you want to work for and find people that work there on some kind of platform (for example, LinkedIn). Start calling, emailing, and visiting these prospective customers until you get an opportunity. You may need to engage several people or companies to get one that yields a sale, but it is worth the work.

2.) Go to a place where your potential customer is going to be. This could be a tradeshow within their industry, a machine shop exhibition where you can show off your samples, an organizational meeting where your customer goes to get more information about their specific industry.

3.) Hire a resource that can reach new potential customers and bring you opportunities. This could be either a salesperson or a firm that specializes in networking.

All of these paths lead to opportunities.

► Step 3

HOW TO BUILD YOUR SALES PIPELINE

We encourage machine shops to build a Sales Pipeline structure between 30 days and 120 days. The EBITDA Growth System model suggests 30 days increments (for example: 30, 60, 90, 120). This form needs to have a structure that lets you add probability percentage, quote number, description, and dollar amount of the most probable quantity you will sell (deliver) on your quote. It is important to add the \$ to the date range the quote will deliver to the customer, because the closer the number is to the 30-day column the more likely it is to a PO that will translate to your capacity plan.

Next, add your open quotes that have a probability of closing to this form. Make sure the formulas calculate correctly. For example, if you have a \$100,000 quote in the 60-day column with a 50% probability of closing, the form needs to show the dollar amount of this specific quote opportunity as \$50,000. These columns should show a sum at the bottom so you can analyze this form against your sales goals and financial plan. There are many sales pipeline structures, and this type of format is one that EBITDA Growth Systems uses and shares with our clientele. Once you enter all of your open quotes, you can see where you are saturated with quotes and where you need to fill more quotes to meet your goals. This should tie into your capacity plan as well as your financial plan to make sure you hit your planned operational and financial marks. This tool should be reviewed weekly with your sales team and monthly with your top management team.

► Step 4

HOW TO MANAGE YOUR SALES PIPELINE

With a Sales Pipeline tool built, you can have some meaningful conversations around probability, project timing, sales dollar totals, and what types of parts you are quoting and need to quote regularly. If you have a \$500,000 financial goal for June, and your sales pipeline shows \$200,000 in new sales probability and you know you are going to have \$300,000 in planned shipments, then chances are, you are going to hit your financial goals for that month. It is critical that your team follows up with customers regularly and has conversations around open quotes. The more you do this, the more accurate your pipeline. While you don't need to call your clients back every day, a weekly check-in around current order progress, current open quotes, and new opportunities coming your way helps keep your relationships intact and provides growth opportunities. The more accurate the pipeline is, the more your team will be operating on the same page. This encourages on-time delivery and growth that does not strangle you and your cash flow.

CONCLUSION

Many of us have found ourselves in the back seat while waiting for the phone to ring, and a quote to show up in our email. If you are not proactive in the sales arena, we feel you are leaving yourself exposed to dry periods and unplanned financial events, many of which could be negative. We urge you today to take some time out of your day to day to build a sales pipeline, and start being proactive in your sales. This may take more than one try, but we know that if you stay at it, you will have planned growth and a bright future.





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Whether you're a large or small industrial company, customers are the backbone of your business.

Many business growth discussions begin with fresh ideas to bring in new customers and retain them.

Over the last few years, industrial businesses have been attuned to the benefits of effective online marketing and sales strategies over word-of-mouth and tradeshows. This is because B2B buyer behavior has changed, and mastering digital marketing is vital to business growth.

When it comes time to open a new facility, expand into new markets and products, or grow your customer base, a few optimization strategies are crucial to maximizing customer outreach.

How to Optimize Your Website to Convert New Customers

Today's buying process begins on the internet. In turn, the value of an up-to-date, easily navigable website is essential.

Your website should provide customers with more than the standard company information so they can understand your business processes, which sectors you serve, and whether or not you can meet their project requirements.

According to a recent Industrial Buying Habits survey conducted by Thomas (Thomasnet.com), more than 40% of customers said that the quality of a website impacts their buying decisions. An optimized website should include the following:

- primary processes and secondary services specifications
- sectors served
- certifications
- facility and equipment lists
- examples of high-level projects
- contact information

Additionally, if you have an option for buyers to submit RFQs, follow up quickly. Our Industrial Buying Habits survey revealed 44% of buyers expect a response within 24 hours.

Be Where Buyers Search for New Suppliers

You may miss out on potential customers if your company information isn't current and consistent across all platforms online. One of the easiest ways to reap the benefits of search engine optimization (SEO) is to take advantage of business profiles on platforms such as Facebook, Google, and Thomasnet.com®.

Additionally, include photos or videos of your products and processes when using online business platforms. Prospects that watch a video typically retain 90% of the information versus retaining 10% of the written content. Videos encourage engagement and transcriptions are searchable, making them one of the most popular ways to connect with customers, prospects, and even new employees.

Don't Forget About Your Current Customers

When searching for new buyers, don't forget about the loyal customers you already have. To retain customers, create regular email campaigns to check in and ensure they are satisfied with your products and services. This could include asking them for feedback on what could be improved, whether it be processes or quality, using an online survey or Net Promoter Score (NPS) tool.

Once you have earned customer loyalty, encourage them to review your company or recommend your products to their network.

Create Content for Every Audience

An important aspect of growing any business is understanding customers and their unique needs. This includes the numerous company hands involved at various buying cycle stages.

Creating varied content and landing pages for different sectors and professionals will help you reach a wider audience and support them in getting their jobs done. Additionally, understanding what an engineer versus a supply chain specialist might need will enable you to speak a language they understand.

There are a few audiences manufacturing companies most often target.

1. ENGINEERS

Engineers are often the first to recognize the need for a new part or technology to optimize processes. When creating content targeted toward engineers, include as much technical information as possible, such as machinery, CAD drawings, and product data. Engineers focus on form, fit, and function of parts.

2. PROCUREMENT PROFESSIONALS

Any content targeted toward procurement professionals should position your company as a supply chain expert, thought leader, and an embracer of new technology. While they are often viewed as only focusing on price, prospective customers actually care about many things – cost, quality, and reliability in the supply chain. Every time a procurement leader

selects a supplier, they are betting their career on that choice being correct. Suppliers that miss the mark on quality and lead times slow everything down and put the company in jeopardy. Remember to reinforce your success in these areas.

3. DIVERSITY OR QUALITY OFFICER

If a large company is following a directive for more diverse suppliers, make it clear whether or not your company meets its goal. This means making your veteran-owned, woman-owned, or minority-owned status and certification as visible as possible on your website.

4. OWNER/CEO DECISION-MAKERS

Even if an engineer or procurement professional saw the value in your company, you still have to get past the Owner/CEO decision-maker at SMBs. With an easily-navigable website, curated content for various audiences, and clear capabilities, winning over a decision-maker will be much easier.

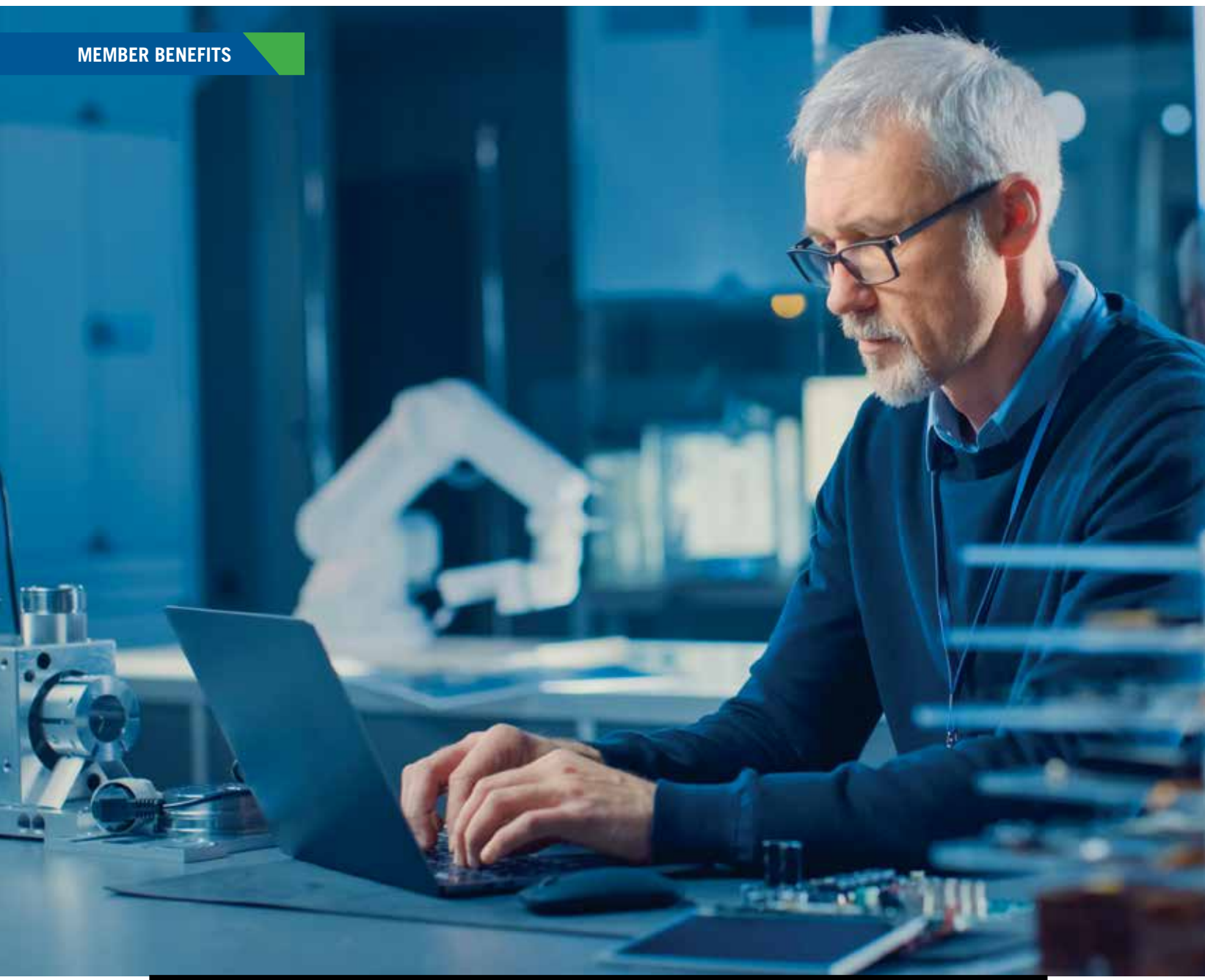
The Next Step to Landing New Customers

Creating a marketing strategy that works for your business takes time and collaboration. It involves defining goals, tying efforts to business objectives, testing what resonates with target audiences, and capitalizing on market trends.

Once your business learns what works, the time spent developing a digital strategy will have a clear return on investment.

Ready to take your industrial marketing to the next level? More than 500,000 North American manufacturers turn to Thomasnet.com to grow their customer base, and special discounts are available for NTMA members. Visit <https://business.thomasnet.com/ntma-partnership-to-get-started>.





Marketing Your Shop: How to Make Buyers Think of **Your Name When They Need Parts**

By: Anne Marie Tracey, Marketing Solutions Specialist at Paperless Parts

We get it: machine shop owners are busy. Very busy. No matter the size of the shop, owners are pulled in countless directions each day, troubleshooting, quoting, talking to customers.

Marketing might seem like the obvious task to push aside as an “extra,” especially if you are busy fulfilling orders. Many shop owners decide growth is uncomfortable and that a “lifestyle” business, capping out around a few million dollars in sales, is less risky. Running a lifestyle business may seem like a great plan—until you decide to sell or transition ownership.

If you wait until you NEED marketing to drive business to your shop, you are most likely too late. But where do you begin?

GETTING YOUR DUCKS IN A ROW

Before diving into planning and content development, it's best to do some basic housekeeping. Conduct a review of your business platforms (Facebook, Google, LinkedIn, etc.): are all of the sections filled out? Does the content accurately reflect the current state of your shop? Do the links work? Is your personal page connected to your business page so you can leverage your contacts? Take time to spruce up your pages if needed with header photos and make sure your personal page has a good photo of you. You want both your business and personal pages to be up-to-date, complete, and professional.

PREPARATION IS KEY

If you want to be successful, planning is key. Upfront planning and organization will make your efforts more focused and effective and end up saving you time in the long run. Follow these planning tips to get started:

- **Commit to a posting schedule** and stick with it. Whether it's once a week or Monday through

Friday, have a plan that you feel confident you can accomplish.

- **Set aside time to plan.** In the end, it will save you from wasting time doing rework.
- Gather and organize ideas, content, and images you already have and **put them all in one place.**
- Consider your **target audience** and what you want them to know about your business.
- Start a **running list of ideas for content** that you can build off of and add to at any time.

SHOUT YOUR SUCCESSES FROM THE ROOFTOPS

As you develop content, it's important to show it off. Share what makes your shop great—your capabilities, your speedy response time, the high-quality parts you make, the industries you serve, that new machine you invested in—on social media, your website, marketing emails, in print, or via digital ad space. Aim to be anywhere your customers are looking (and with more than 300,000 part buyers on LinkedIn alone, the potential is undeniable).

TAKE THINGS TO THE NEXT LEVEL

Once you start sharing content more consistently, maximize your efforts through best practices:

- Share your business posts on your personal page to increase followers.
- Invite your personal connections to follow your business page.
- Reach out and connect with everyone who has requested information.
- Respond to comments on your posts promptly and professionally.

Keep in mind that as you, your employees and your network engage more with your content—whether it's through likes, shares or comments—social feed algorithms are programmed to increase the number of people who see your posts and are exposed to your content.

CONSISTENCY IS KEY

You can monitor your progress by looking at key metrics, such as an increase in followers and contact form submissions, and of course, RFQs. Patience is key as growth does not happen immediately. The consistency of your efforts and the quality of your content will directly affect your success.

Find a Marketing Partner Who Knows Manufacturing
As the #1 quoting platform in manufacturing, it is Paperless Parts' mission to help job shops win more business. If you want your content to feel like it's coming from you and not some detached agency, the Marketing Solutions team at Paperless Parts can help you achieve just that. Our team of writers, designers, and project managers craft content in your unique voice to help you stand out from the crowd and make customers think of your name when they need quality parts. Request a free consultation today.

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