



AUTOMATE CANADA MAGAZINE

The official magazine of Automate Canada.

Issue 2, Spring 2023

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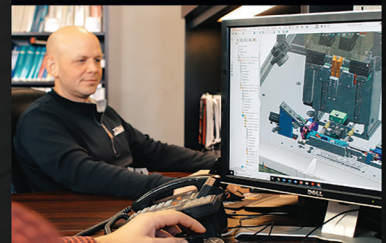
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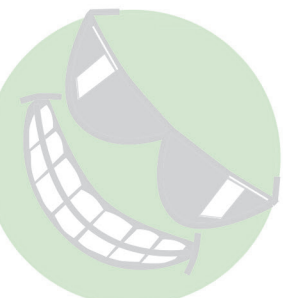
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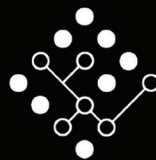
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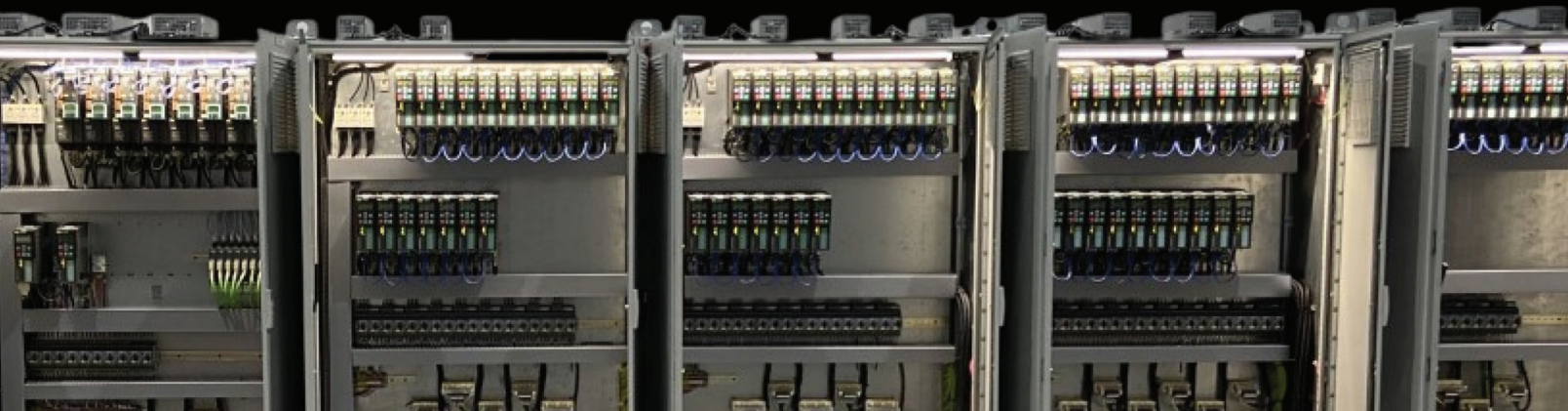
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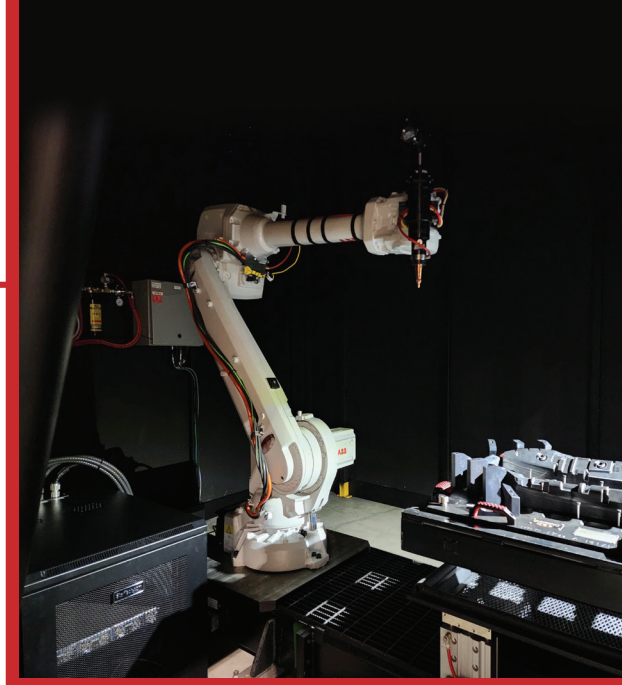
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Cover photo courtesy of Ro-Matt International Inc. (www.ro-matt.com)

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Institute for Border Logistics and Security
5844 Malden Road, Unit #140,
Mailbox #302
Windsor, Ontario N9J 1S4
Email: info@automatecanada.ca
Tel: (519) 818-8866

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309 Youville Street
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Toll-Free: (866) 999-1299
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sales@matrixgroupinc.net
www.matrixgroupinc.net

President & CEO

Jack Andress

Operations Manager

Shoshana Weinberg
sweinberg@matrixgroupinc.net

Senior Publisher

Jessica Potter
jpotter@matrixgroupinc.net

Editor-in-Chief

Shannon Savory
ssavory@matrixgroupinc.net

Senior Editor

Alexandra Kozub
akozub@matrixgroupinc.net

Editor / Social Media Manager

Jenna Collignon

Finance / Administration

Lloyd Weinberg, Nathan Redekop
accounting@matrixgroupinc.net

Director of Circulation & Distribution

Lloyd Weinberg
distribution@matrixgroupinc.net

Sales Manager - Winnipeg

Neil Gottfred

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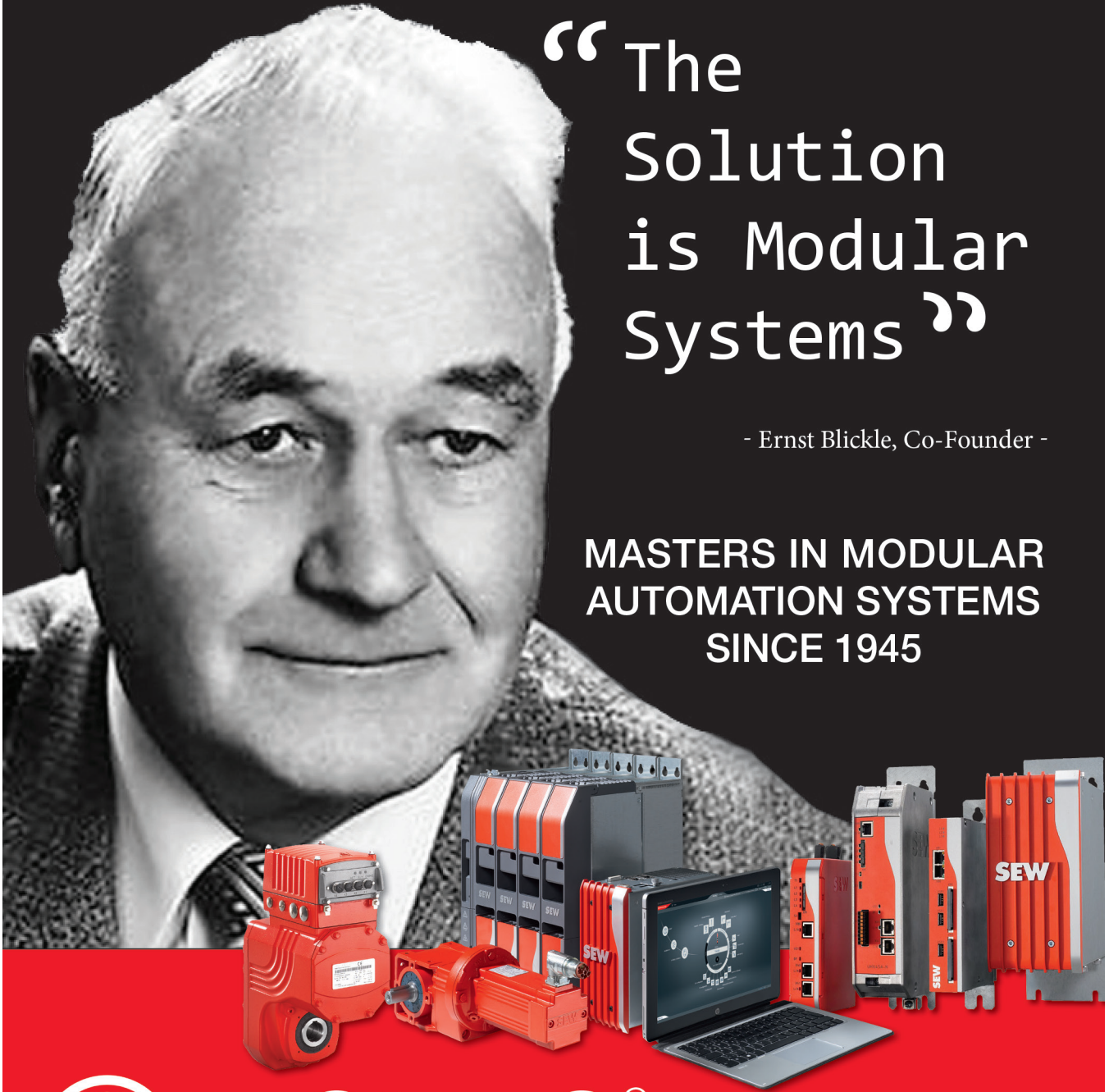
James Robinson

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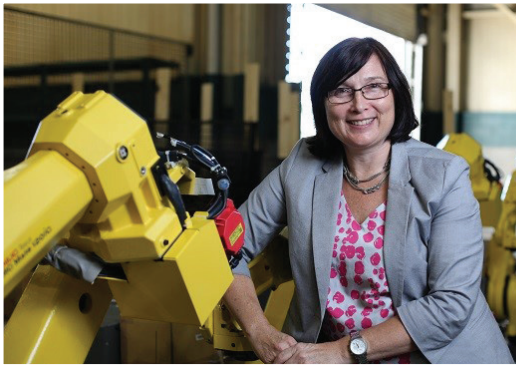
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Greetings from the Chair of Automate Canada

As Canadians, we're known for our constant apologies. I feel no need to apologize for the work of Automate Canada – both the industry association and the magazine. I am very proud of the work both are doing to inform manufacturers about advanced manufacturing technologies, to foster adoption of these technologies here in Canada as well as elsewhere, and to promote the tremendous capabilities of our sector.

Providing strategic advocacy and targeted actions for a remarkable sector; the Automate Canada industry association was founded to foster a thriving and sustainable Canadian industrial automation sector.

In typical Canadian fashion, our industry tends to lead with a modest and understated presentation of our capabilities. Automate Canada – both the industry association and the magazine – aims to change that. We're firmly convinced that we need to promote the tremendous achievements and advanced technologies developed right here in Canada to the world.

Within the pages of this issue, you'll learn more about the unique products and services offered by Ro-Matt International and Trillium Machine and Tool Inc. Data analytics

and technology applications in predictive maintenance and digital twin technologies will be subjects for our deeper dives this month, as will big data. You'll learn more about the agile and forward-thinking industrial automation companies in Canada from this engaging issue.

With expertise from robotics to advanced controls, emerging vision and virtual reality applications, to digital technologies designed specifically for manufacturing, the Canadian industrial automation industry is smart, advanced, and capable. While Automate Canada is the first association established in Canada specifically for the industrial automation sector, our members have a significant and long-standing presence in the industry. Thank you for investing your time in learning more about our resilient, innovative Canadian industrial automation experts and the solutions we can offer for world class manufacturers.

IN TYPICAL CANADIAN FASHION, OUR INDUSTRY TENDS TO LEAD WITH A MODEST AND UNDERSTATED PRESENTATION OF OUR CAPABILITIES. AUTOMATE CANADA - BOTH THE INDUSTRY ASSOCIATION AND THE MAGAZINE - AIMS TO CHANGE THAT.

Write for Automate Canada Magazine – Share Your Expertise!

Attention members of Automate Canada, as well as sector experts – we are looking for articles for future issues of the magazine! If you have knowledge and a story to share, please email Editor, Shannon Savory (shannon.savory@matrixgroupinc.net) and copy Automate Canada's Executive Director, Nicole Vlanich (nicole@automatecanada.ca) with a 100-word abstract and the name / title of the author(s).



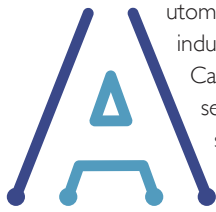
If your topic is approved, you will be provided with a word count and deadline. Please note that articles cannot be product or company promotional. They can mention products and companies, but articles cannot "sell" their use.

Authors' names will be included on the byline and each article contributed and approved will include space for an author biography and contact information.



UP FRONT

All About Automate Canada



Automate Canada is a Canadian industry association representing Canada's industrial automation sector; service providers, and suppliers. Founded in 2018 by the Canadian Association of Moldmakers (CAMP) and supported by Invest Windsor-Essex and NRC-IRAP, Automate Canada is an informative community of vibrant industry leaders who are facilitating the development and adoption of technology.

Canada has established a reputation as a hub for innovation in manufacturing automation and we are proud to be a part of such an impressive industry. Representing one of Canada's most essential technology industries, industrial automation contributes an estimated \$7 billion to Canada's economy yearly and creates approximately 40,000 jobs per year. Our industry contributions continue to grow and expand as technology continues to advance.

Automate Canada leads, advocates, and showcases the Canadian automation industry strengths and capabilities. We assist and promote our members and engage in activities that support business success and innovation expertise. We invest in market and industry research to identify emerging trends and issues within our industry and assist our members with any challenges. We have fostered relationships with trade commissioners, government officials, and international companies to ensure our place as a voice for our members and industry.

Our strategic pillars provide a roadmap to represent our industry locally, nationally, and globally and structures our focus when advocating to government and developing new programs. Our pillars and roadmap also ensure that we are addressing the needs of our member companies.

One of our pillars is Skill and Talent Development within which we work to address skilled labour shortages and provide our members with the knowledge to transition to Industry 4.0 practices and digital transformations. Our efforts are geared towards methods of developing a talent pipeline of skilled and ready personnel interested in advanced manufacturing. We work with partners, such as We Build a Dream and the YMCA, to attract under-represented groups to our industry and to

develop programs to encourage their involvement. We create and provide access to learning and training programs for our members and promote upskilling and reskilling opportunities to ensure our members and their employees are ready to adopt new technologies.

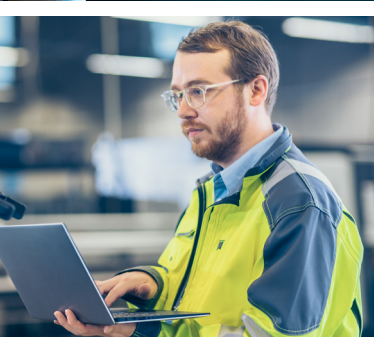
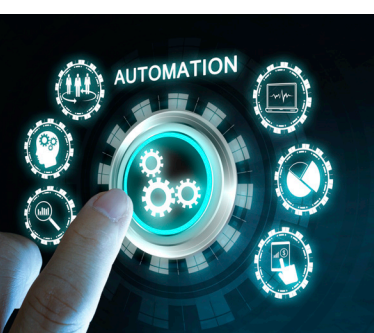
Automate Canada also embraces equality, diversity, and inclusion practices and provides information for our members to adopt these practices. We work with federal and provincial governments to advocate for the importance of skill development in our industry. We develop youth-focused initiatives and work with secondary and post-secondary institutions on curriculum development to ensure the training being provided is keeping up with innovation and preparing youth to enter the workforce, while cultivating an interest in advanced manufacturing.

Another one of our strategic pillars is Branding and Collaboration. Within this pillar we develop partnerships to promote 'Made in Canada' products as good value with high quality. We work with our partners to ensure Canadian industrial automation maintains their reputation as innovative and reliable while promoting our members to increase global relationships and foster business opportunities.

Our strategic pillar, Technology and Innovation, aims to support our members in their transition to Industry 4.0 practices and digital transformations. We promote a culture of innovation and ensure our members have access to funding information, resources, and tools to facilitate their transition. We promote and participate in research and development projects, as well as emerging technologies. We work with our members while developing new technologies and IPs, while performing research and development activities or commercialization plans.

We continue to add programs and services for our members including discount and affinity programs, training and development opportunities, and marketing and promotion support. We have a full calendar of upcoming events, including networking opportunities, trade shows, and learning and training events. We will continue to develop creative and innovative ways to benefit our members.

Please contact info@automatecanada.ca if you have any questions.



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Why Should You Join Automate Canada?

Canada has an established global reputation as a hub for innovation in manufacturing automation.

Automate Canada leads and advocates for the Canadian automation industry, assisting and promoting our members.

Automate Canada is a national association representing companies involved in the industrial automation industry as well as service and supplier companies which provide specialized technologies to our industry.

Our mandate is to:

- Promote and develop the global exposure of the Canadian industrial automation industry.
- Be the voice of our industry to all levels of government. Automate Canada will focus on trade discussions regarding the North American Free Trade Agreement (NAFTA) / the United States-Mexico-Canada Agreement (USMCA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), Canada-Mercosur, and the Trans-Pacific Partnership (TPP), as well as on intellectual property, research and development, and commercialization issues.
- Encourage the development and adoption of technology in the manufacturing sector as a whole, as well as in the industrial automation industry,

and in partnership with post-secondary educational institutions.

- Develop the next generation of highly skilled personnel through youth-focused initiatives.
- Assist small to medium enterprises (SMEs) in the industrial automation industry to grow their businesses locally and globally.
- Be committed to working with other organizations and associations to build global relationships.
- Assist members to identify opportunities for export.
- Invest in market research and industry research in order to identify emerging issues and trends affecting our industry and to target growing markets.
- Support Canadian SMEs in their path to prosperity, increased competitiveness, and improved capacity domestically as well as in the international marketplace.
- Showcase our industry's capabilities and strengths on a domestic and global stage through a range of direct activities and materials, like printed and digital directories, online presence, trade shows, B2B meetings, and site visits.

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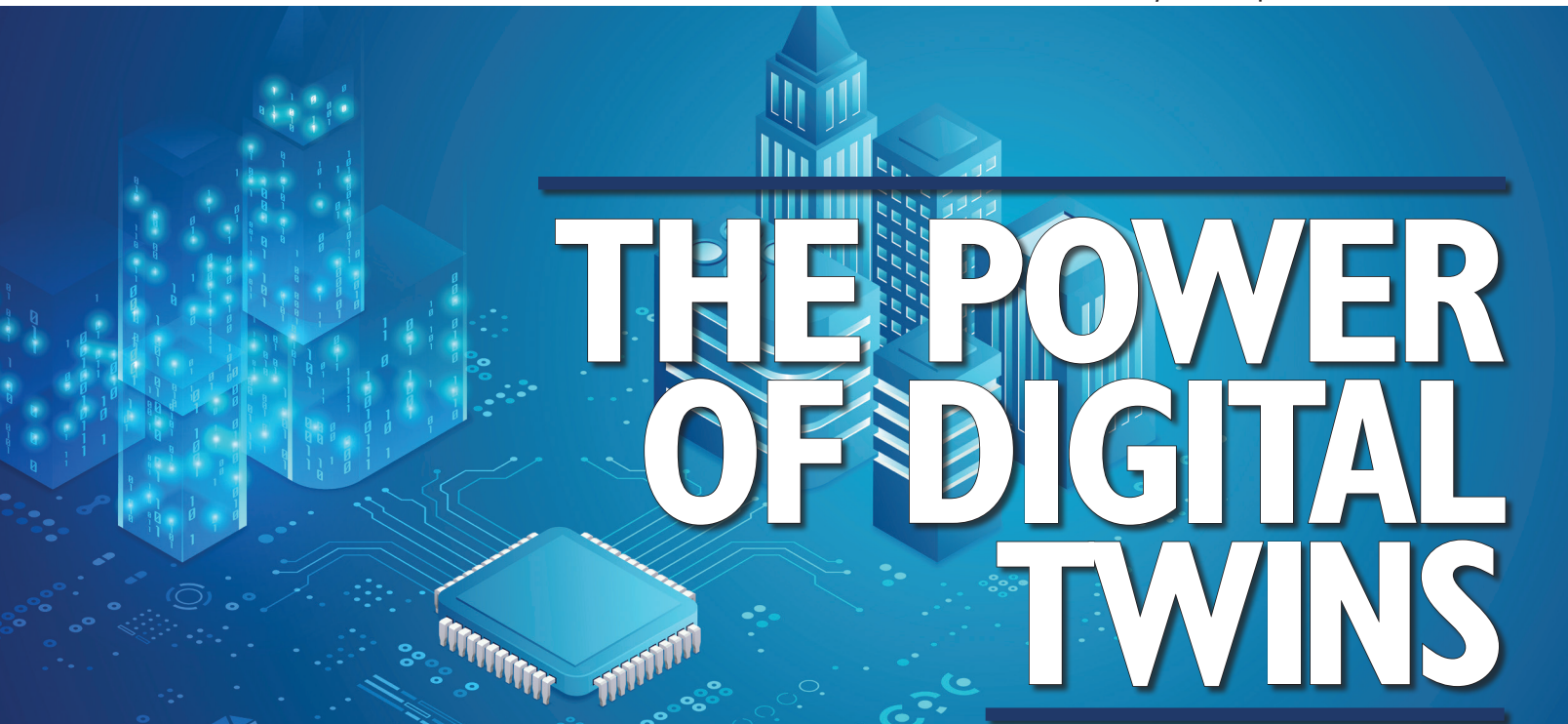
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THE POWER OF DIGITAL TWINS

Replicating the real-world digitally will be a game changer.

Digital twins – virtual replicas of real-world objects, systems, or processes – are immensely powerful tools that are changing our world and how we do business with it.

Manufacturing already understands the power of digital twins to their business.

The sector has a long and rich history of using digital models to aid design of component parts and virtual simulations that help optimize the complex systems in which those components operate or the processes that build them. In 2002, Dr. Michael Grieves was the first to introduce it publicly to the Society of Manufacturing Engineers as the underpinning concept model for product lifecycle management, although it would be another eight years before NASA's John Vickers coined the term 'digital twin.'

There are three emerging characteristics that enable digital twins to deliver greater value within the manufacturing environment.

The first is scale and complexity. There is more than a dash of grey in this particular definition, but it does help to

think of simulations as typically focusing on a single object or process, whereas the digital twin truly flourishes when it is making sense of complex systems – even systems of systems. This opens a far wider range of opportunities for digital twins to deliver insight across multiple areas of your business.

The second major characteristic is in the approach to data. While simulations and digital twins use some form of the data to intelligence model (collect > correct > curate > compute > communicate > conclude), digital twins are more geared towards the consumption of real-time data fed by the rapid adoption of sensor technology, the rise of the Industrial Internet of Things (IIOT), and ever-increasing enhanced connectivity. This positions digital twins beyond the simple provision of insight that informs management decisions to complex systems oversight and real-time operations optimization.

The final key characteristic is automation. Rather than only generate insights and inform decision making, digital twins play an active role in operations management through rule-based automation based on organizational algorithms. This growth in fully and semi-auto cognitive is driving

exponential value in plant efficiency, process productivity, and safety dividends.

From our vantage point, we see several main growth drivers for digital twins in manufacturing:

- 1. Core capability.** The hardware is cheaper; the foundational software platforms and decision support tools are more business friendly; and there is far greater access to critical resources – supported by a new generation of data and digital scientists.
- 2. Use cases.** The increasing range and diversity of digital twins, across multiple sectors, means that practical use case application is helping to codify complexity, demystify development, extend the scope of digital twins from component and asset centrality to system-wide management, and enable a culture of digitally enabled, data-driven decision making. All these elements are the critical building blocks ready to be recycled back into industry optimization.
- 3. Data maturity.** Building on practical use cases, business generally, and manufacturing specifically, is becoming far more sophisticated in its approach to data. Better data-sharing agreements

are driving supply chain optimization, the use of a more federated approach to data and cloud-based data commons is accelerating digital twin development, and a growing maturity in the understanding of data value – once stranded data is unlocked across the manufacturing value chain.

4. Connectivity. If real time data is one of the key characteristics of the digital twin, then the rise of wired and wireless IIOT over the past decade has been a game changer – more sensors, capturing more data, more regularly has made digital twins more viable than ever before. But this is set to pale in comparison with the role out of hyper-connectivity over the next five years. 5G – both commercial and private networks, as well as Wi-Fi 6 – will fuel an explosion of machine-to-machine (M2M) connections, based on materially faster speeds and increased capacity, data latency well inside human reaction times, and remote sensor accuracy to a level that's never previously been experienced.

5. Responding to bigger themes.

Finally, digital twins are beginning to enable organizations to tackle some of the bigger challenges around sustainability, social equity, and economic impact – all of which are demanding an increasing focus in boardrooms across Canada.

So, what's next for organizations either starting their digital twin journey or looking to scale up and maximize value?

Focus on real-world use cases

Here's one example:

“Could we generate more output power from our existing turbines?” a European energy company asked KPMG in the Czech Republic. The company had vast amounts of performance measurement data, market data, and external source data available. However, it didn't want to risk shutting down one of its wind farms to conduct physical experiments. A digital twin would be needed.

KPMG developed digital twins using mathematical and artificial intelligence prediction models to forecast the maximum achievable output power based on different wind turbine settings, wind strength, and direction. That allowed the team to test whether different positioning of the nacelle

and blade angles might deliver more output power:

The digital twin demonstrated that turbine performance could be improved by up to 2.9 per cent – allowing each turbine to generate more electricity, worth up to EUR 9,300 per year. With some 200 wind farms in this organization's portfolio, that could add up to EUR2.2 million in additional revenue.

Only as good as the data

You can build a virtual model of almost anything – but it's only as good as the data

underpinning it. This data then needs to be turned into value.

When creating a digital twin, organizations should make sure that they are capturing all these different data types, both structured and unstructured, in a consistent and repeatable way. The data must be accurate and relevant, which means having processes for verifying the quality of the data and ensuring that it is managed consistently.

Data governance is another key factor to consider. It's essential to establish clear



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policies and procedures for managing and protecting data, including who has access to it and how it can be used. This includes robust cybersecurity measures.

The moment the data gets pulled in though it can potentially be already outdated. That's why many organizations prefer virtual data visualization, where they don't touch the source system. They pull in data as needed and in its form.

Be pragmatic

Building and operating a digital twin requires collaboration across the business – operations, finance, supply chain, and planning – and the information technology (IT) team. The business must articulate the need, quantify the value, and develop supporting capabilities. They must all work closely together to mitigate risks and maximize value.

Be pragmatic in your approach. What is the business trying to achieve? What

data, technologies, and systems can be integrated? Build capabilities and sophistication over time, while maturing your risk and cyber capabilities.

If the business isn't driving digital twin development, then the tail is wagging the dog.

The question no longer is whether you need a digital twin or not. Because if you're not using one, you will find yourself at a competitive disadvantage. Rather, the question is whether your digital twin is delivering as much value as it could. 🍁

Colin Earp is a Partner and KPMG in Canada's Global Digital Infrastructure and InfraTech Leader. Alison Glober is a Partner and the National Manufacturing Sector Leader for KPMG in Canada. With contributions from KPMG's JQ Lien and Naina Gazula in Management Consulting.

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WHAT'S THE BIG [DATA] DEAL?

Big data can reveal big insights; is your business realizing the benefits?

By Paul Adair, Staff Writer

The term 'Big Data' has been thrown around for years, yet it often remains misunderstood. Referring to the three Vs (high-volume, high-velocity, and high-variety information assets), big data is simply a collection of data that is too large, and too complex, or is generated at too high of a volume for traditional data management tools (like relational databases) to handle.

"Big data refers to extremely large collections of data – called datasets – that can be analyzed to reveal patterns, trends, or associations in that data," says DarwinAI CEO, Sheldon Fernandez. "When we talk about big data, we're typically talking about very large collections of data, well beyond what would be on your iPhone or your desktop computer, and the science of looking at that data to extract trends that might prove useful for a business, individual, or an organization."

There are a couple of key events that have happened within the manufacturing space to make the use of big data possible. This includes

the advent of cloud computing over the last 20 years. No longer do companies need to have a massive amount of storage space, hardware, or backup systems on hand to maintain a very large data set – it can now all be stored in the cloud.

For just a couple hundred dollars a month, users can receive significant amounts of space and computational power that they couldn't access before," says Fernandez. "In addition, the raw computing power that the average software engineer has at their disposal – and often literally in their hands – has dramatically increased over the last 15 years."

"Before, what you really needed was database admin expertise and some very specialized skill sets to conduct deep data analysis on big data," says Fernandez. "Now, there are tremendous resources out there, where the average, technically minded individual can get access to the type of technology that makes it easier to analyze and derive value from big data."

There are many ways that big data can be collected. In the manufacturing sector, the source of big data is generally gathered from the production process through some combination of machine, device, and operator data, with real-time data from shop-floor assets making up the largest share by volume. Broadly speaking, this data is usually collected by software automatically consuming data feeds from shop-floor equipment in real-time.

A MAIN BENEFIT OF BUILDING A LARGE BODY OF DATA ABOUT YOUR OWN PRODUCTION PROCESS IS THAT IT CAN BE MINED FOR NOVEL INSIGHTS.

- DOUGLAS SARTORI,
PARALLEL 42 SYSTEMS

Capturing this real-time data from production, however, can quickly result in very large data sets, which requires sophisticated techniques to properly manage and analyze. What's usually required is a dedicated analysis engine that combines a distributed file system for storing large volumes of data with the parallel processing of distributed data to deliver keen insights.

It makes sense then why the topics of big data, artificial intelligence, and machine learning are so often linked with one another. We can even see this play out in the 'real world' today, where there are more and more AI innovations available to the public, such as OpenAI's ChatGPT.

"You can ask ChatGPT a sophisticated question with all the idioms of the English language and quickly get back a very sophisticated response," says Fernandez. "This is because ChatGPT is a large language model that works against a dataset that is gargantuan in size. You can think of it as a very sophisticated application of big data that is only made possible by increasingly sophisticated artificial intelligence."

According to Douglas Sartori, Principal Consultant at Parallel 42 Systems, the real value of big data is in the data itself. He says that processing large volumes of data in real-time can prove immensely beneficial for businesses in a number of ways.

"A main benefit of building a large body of data about your own production process is that, besides providing real-time and historical alerts for identified conditions or potential quality problems, it can also be mined for novel insights, as well as make challenges and opportunities visible at a granularity and speed that otherwise wouldn't otherwise be possible," says Sartori.

Despite the value of big data, there are still some challenges, such as its complexity and the sheer scale of collecting and making good use of it, causing many companies to become overwhelmed and mired at the implementation starting line. This is why manufacturers need to have a plan and think strategically when it comes to adopting big data techniques and processes within their companies.

"It is a good idea to examine business problems holistically and go to the marketplace for solutions, rather than starting with a technology you want to adopt and working backwards," says Sartori. "The volume of data that relational systems can handle is constantly increasing, and practitioners who can make effective use of traditional tools are far more accessible."

The tools and techniques for working with big data are constantly maturing and improving, and traditional tools are continuing to advance into spaces currently occupied by big data techniques. As such, the importance of understanding and finding uses for big data will only become more important as time goes on – and there is no better time to start your journey than now.

"If you're not currently exploiting these techniques, it may be worthwhile to work with an expert practitioner to help understand the current state of your data and the options you have for data collection and storage," says Sartori. "Understanding where you are is the essential starting point to developing an effective roadmap for any technology adoption. A project like this can unlock the value in the data that you have and then identify the potential data you're leaving on the table." 🍁



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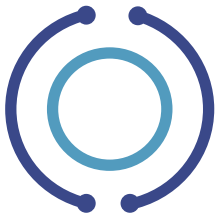
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A SMART APPROACH TO A CONNECTED FACTORY

Predictive maintenance is a powerful asset.

By Lucas Hale, ANCA CNC Machines



Over the past decade, new technologies have increasingly permeated the factory floor. Automation, always a part of manufacturing, has

quickly escalated thanks to ever-increasing computer processing power and data storage. At the same time, technologies such as artificial intelligence, the Internet of Things connectivity, cloud computing, big data analytics, 3D printing, and many others that were previously complex to install and configure have become affordable and scalable. They too have found their way into industrial applications.

This rapid acceleration of digital transformation has been termed Industry 4.0 – the Fourth Industrial Revolution. A major outcome of this period has been that the truly connected factory, or smart factory, is a reality. As more machines begin to communicate with each other, productivity increases. Gains in efficiency, using analytical tools that can predict maintenance needs, improve it even more. But the real benefits of a smart factory are far beyond mere productivity. It provides the ability to predict and adjust to changes, both internal and external, to offer unprecedented agility and flexibility, and create real competitive advantages for a business.

It's about seeing as much as doing

While it's easy to see how automation increases productivity by speeding up processes, streamlining product movement between machines, and reducing errors, the real benefits of a smart factory come from a far broader concept.

Smart factories offer complete transparency by integrating machines, processes, and people into a single, digitally connected system. Sensors feed data from every element of the manufacturing process all the time, so the information reflects current conditions. It's then integrated with data from suppliers and customers to create a holistic view of upstream and downstream supply chain processes.

The power of prediction

The ability of the smart factory to predict future outcomes based on historical and real-time data offers benefits in all sorts of ways. From anticipating issues with inventory to predicting quality problems to monitoring areas of safety concern.

One significant opportunity offered by smart factories is predictive maintenance. Until now, organizations had to choose between maximizing the life of a part at the risk of it failing and causing machine downtime or incurring the cost of replacing parts early, perhaps unnecessarily.

Predictive maintenance means data gathered from connected, smart machines

which enables accurate prediction of when and where failures could occur, maximizing the life of parts and minimizing unnecessary downtime.

The silver lining of the cloud

The pandemic has only accelerated the use of cloud applications around the world. The ability to access information from anywhere to make informed decisions is a substantial component of the smart factory.

With data gathering at the very heart of smart factory procedures, utilizing the cloud is fundamental to its operation. Using a cloud service provider (CSP) removes the need to invest in on-site server infrastructure, maintenance, and IT staff.

The benefits include unlimited scalability, making it easy to grow without the need for additional infrastructure. Cost is usually tied to consumption, so you're only paying for what you use. And the CSP is responsible for updating and maintaining the operating systems.

While some people are concerned about security, the fact is that a reputable CSP is going to have much greater resources to put into cybersecurity to protect your data in its cloud than you could ever hope to have in an on-site system.

The benefits of being smart

A smart factory can optimize the use of every asset. It should result in lower downtimes, greater capacity, reduced changeover time, and more.

FACTORY

Detecting quality defects faster and identifying the cause results in lower scrap rates and lead times, as well as better quality products.

This means any change from the expected can be instantly recognized and acted upon. Whether it's a difference in the availability of raw materials, a bottleneck in production, a shift in market demand, or an infinite number of other variables. And, of course, any necessary changes can be actioned either by human intervention or by autonomous decision-making.

Just about every benefit of running a smart factory is likely to lower costs, increase efficiency, expand optimization, establish more predictable inventories, improve predictive maintenance, and so on.

There will also be benefits for both the environment and staff. Operational efficiencies may result in a smaller environmental footprint, while a reduction in the potential for human error should reduce the likelihood of industrial accidents.

It's also worth acknowledging that likely changes in labour markets mean moving towards a smart factory operation can help insulate you from skills shortages.

Step by step

While the technology for building a true smart factory certainly exists today, it's unnecessary to change everything at once. An important attribute of the connected factory is that it'll continue to evolve as technology and requirements change. Build it incrementally, adding elements as you can. Ensure that you adapt the system to suit your business, not the other way around.

Smart move

Investing in smart factory capability, at whatever speed, makes sense for your business – it is inarguable. The benefits of agility, connectedness, and transparency are essential to enable you to function more effectively and efficiently in an ever-increasingly complex and rapidly shifting market. 🌸

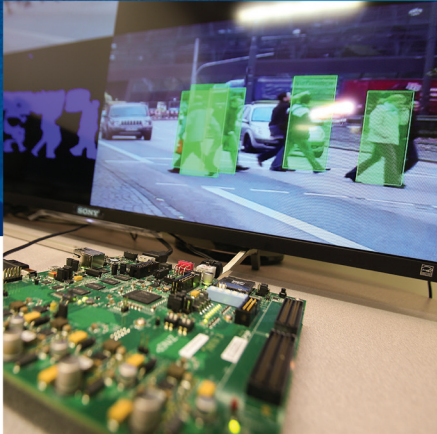
Lucas Hale is the Global Marketing Manager for ANCA CNC Machines. This article, which first appeared on Cutting Tool Engineering's website at www.ctemag.com on March 20, 2023, is published here with permission from CTE Publications Inc.

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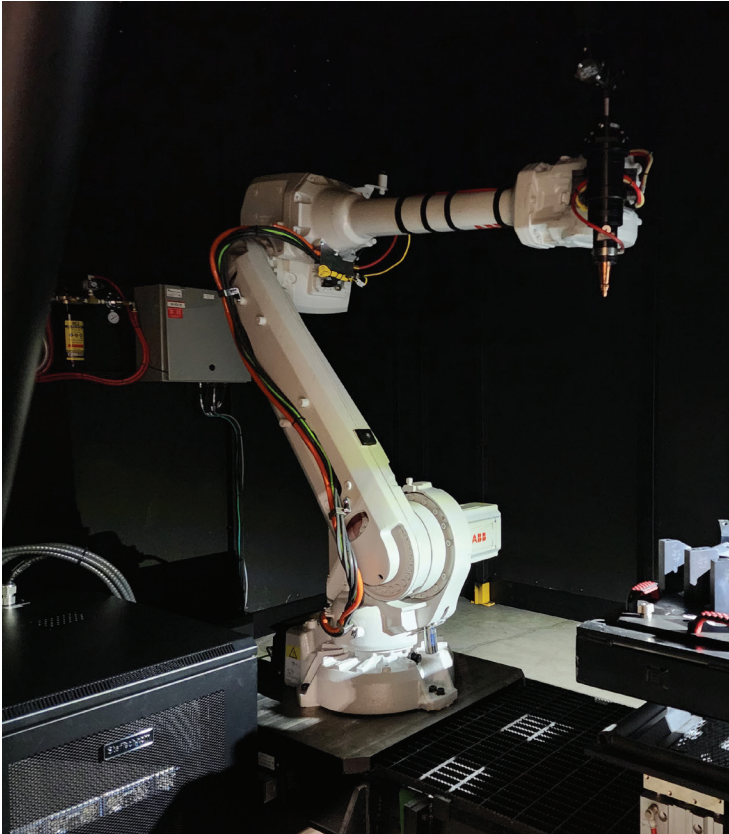
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MEMBER SHOWCASE

RO-MATT INTERNATIONAL INC.



A robotic laser cutter at Ro-Matt.



Founded in 1980, Ro-Matt International Inc. is a member of a larger family-owned group of companies that has been serving the metalworking and automotive industries since 1929.

Ro-Matt designs and constructs engineered manufacturing solutions that assist clients in their efforts to increase productivity and product quality. Operating out of a 40,000 square foot engineering and manufacturing facility located in Oldcastle, Ontario, and equipped with high assembly bays and overhead cranes with a lifting capacity of about 32 metric tonnes (35 tons), there is virtually no project that is too large for the company to tackle.

"The quality of our welding and assembly equipment, automation and material handling systems, custom machinery, and hydraulic cylinders are second to none," says Ro-Matt President, Steven Del Duca. "We are a complete, turnkey service provider. Our clients come to us with an idea, and we are able to develop the process, manufacture and install the equipment, and provide training to their staff to get their job done."

To meet the needs of its customers, the company employs a talented, 40-person team consisting of administrative staff, engineering, estimating, and sales, as well as a team of experienced skilled trades comprised of fabricators, welders, machinists, machine builders, electricians, and controls technicians.

Ro-Matt started out during the automotive era and has worked within this important sector for more than three decades. This



Ro-Matt's client list has grown to include a wide range of industries and sectors seeking automation solutions. All photos courtesy of Ro-Matt.



Ro-Matt's 40,000 square foot engineering and manufacturing facility enables the company to tackle projects of all sizes, large and small.

has taught the company what it takes to produce parts to the highest quality, both repeatedly and cost effectively. Over time, the range of the company's services has expanded to encompass other industries, such as off-site construction, aerospace, transportation, production, manufacturing, and metalworking.

"Our list of clients today includes some of the largest and most successful companies in the manufacturing and metalworking industries worldwide, and we have serviced their locations throughout

Canada, the United States, Mexico, and Europe," says Del Duca. "Recently, we have been evolving the company to assist our clients in a variety of other industries that are now beginning to adopt automation into their manufacturing processes. These companies are recognizing that the future of manufacturing will involve and heavily depend on automation, and Ro-Matt, along with our industry partners, is ready to answer the call."

Just as a rolling stone gathers no moss, Ro-Matt has sought continuous

"COMPANIES ARE RECOGNIZING THAT THE FUTURE OF MANUFACTURING WILL INVOLVE AND HEAVILY DEPEND ON AUTOMATION."

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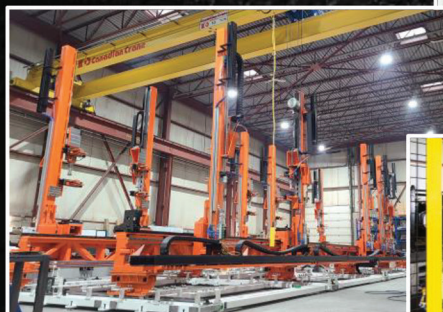
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improvement ever since it was first established more than 30 years ago. Looking ahead, the company will continue to adapt and change within the manufacturing space to better support its clients, who are facing a multitude of challenges.

"We have learned that by staying on the leading edge of technology and adopting and implementing tried and true engineering practices, we are able to create reliable systems that stand the test of time," says Del Duca. "We are today finding ourselves increasingly working with industries that are not traditional adopters of automation but are still looking to advance their businesses to include more automation and mechanization. We are leveraging our many years of experience, as well as working with technology leaders, to provide equipment and services to help our clients meet their current and future goals."

Ro-Matt is proud of its membership with Automate Canada and views the association as a powerful resource for networking and membership provides a chance to work with other automation companies in a non-competitive way. Automate Canada also provides the company timely and useful information about the industry sector, government and legislative issues, current and upcoming programs, and funding opportunities.

"Most people do not realize the role that automation and manufacturing play in their everyday lives," says Del Duca. "We are the companies that make the equipment and machines that make things. Automate Canada gives us the voice that is needed to help others understand our value and helps promote our industry so that we can continue to thrive." 🍁

MEMBER SHOWCASE

TRILLIUM MACHINE AND TOOL INC.

Some say that opportunity knocks. For Trillium Machine and Tool Inc. President, Mike Hamelin, opportunity carried a banker's box full of quotes.

"22 years ago, I worked at a local automated machine shop in Windsor and, when the owner of the business decided to retire, he came up to myself and two other gentlemen with the banker box full of his quotes for the prior year and said, 'If you

guys want to go start knocking on doors with my old quotes, you can start your own company,'" says Hamelin. "So, that's exactly what we did. In November 2002, the three of us came up with a name, got a little 1,500 square foot unit, and just started building machines."

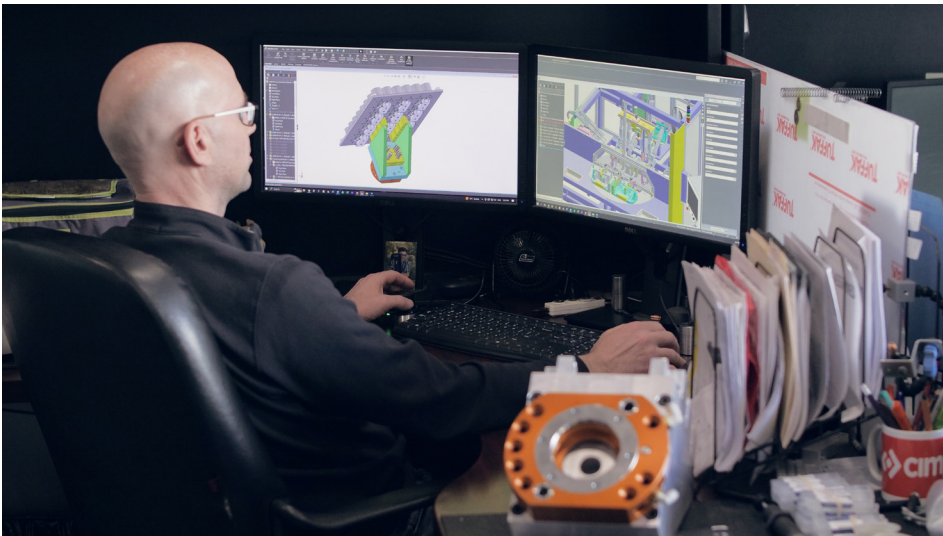
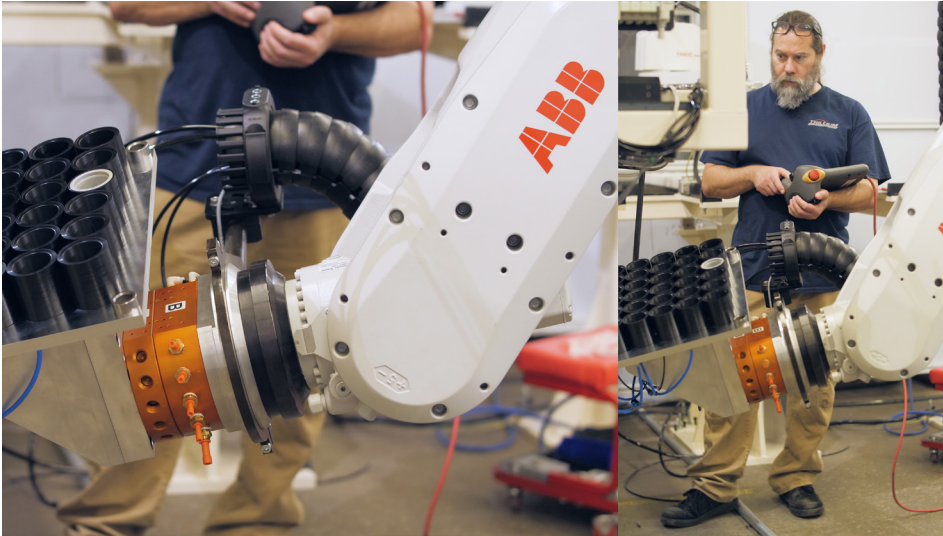
In the two decades since it was first established, Trillium has expanded its facilities, has 32 employees, and is today one of south-western Ontario's leading solutions providers. What hasn't changed, however, is the company's pride in meeting the unique

– and often eclectic – needs of each client and its steadfast belief that every customer should be treated equally.

Trillium designs and builds custom specialty machines for a variety of sectors and industries, and the company's team of experienced professionals use in-house design, fabrication, and assembly to come up with a solution for any manufacturing challenge their customers might have.

"We will make anything, and every machine we build in our shop is custom specifically to each customer's needs," says Hamelin.





As a custom machine builder, Trillium takes pride in fulfilling the unique needs of their customers. From designing and building custom machinery and tooling; to fully automating unique equipment; and providing reliable mechanical, electrical, and programming services, Trillium Machine and Tool Inc. is dedicated to meeting the needs of their customers.

“On a Thursday we might get a customer with some oil caps that need o-rings installed and then the next week someone has springs they need tested for their compression rating. We’re never afraid to tackle any of the oddball jobs people might throw at us.”

The company currently manufactures out of a 10,000 square foot general machine shop equipped with six CNC machines, vertical milling machines, and lathes, among other pieces of equipment. Everything is built in-house, and Trillium makes every effort not to outsource unless it is absolutely necessary.

“Every machine that you see is designed and built under our roof,” says Hamelin. “We build our own electrical panels and have them CSA inspected right here in the shop. We do our own PLC [programmable logic controller] and HMI [human machine interface] programming and have electricians on staff who personally wire the machines, hook them up to our computers, and program them. From conception to implementation, we are a turnkey, one stop shop.”

Hamelin has grown the company conservatively through word of mouth, and – throughout the years – Trillium has stayed close to its Windsor roots. Whether it’s the automotive industry, a bottling plant, or the business down the street, the vast majority of Hamelin’s customers are local to the municipalities of Essex County, each of which have come to appreciate Trillium’s unwavering commitment to quality of service.

Trillium greatly appreciates their membership with Automate Canada, seeing it not only as a valuable networking resource but also for its ability to provide the Canadian automation industry with a collective voice that advocates for issues of importance.

“Automate Canada provides surveys to its members throughout the year that we can all contribute to, and then broadcasts the results to allow us to see where we all stand on issues,” says Hamelin. “When you’re a small company, it can sometimes be difficult to be heard, but Automate Canada speaks with the government on behalf of all its members and does what it can to help us on the matters that impact our industry.”

Looking ahead, Trillium plans to continue pursuing measured growth in the Windsor area, and will remain focused on the things that have made it successful over the years: quality products, quality service, and a dedication to meeting the unique needs of each customer. 🍁

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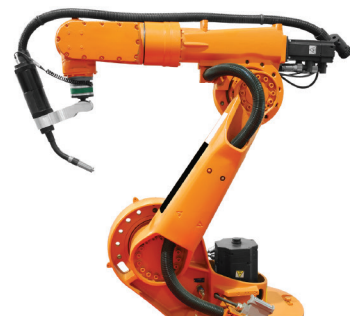
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