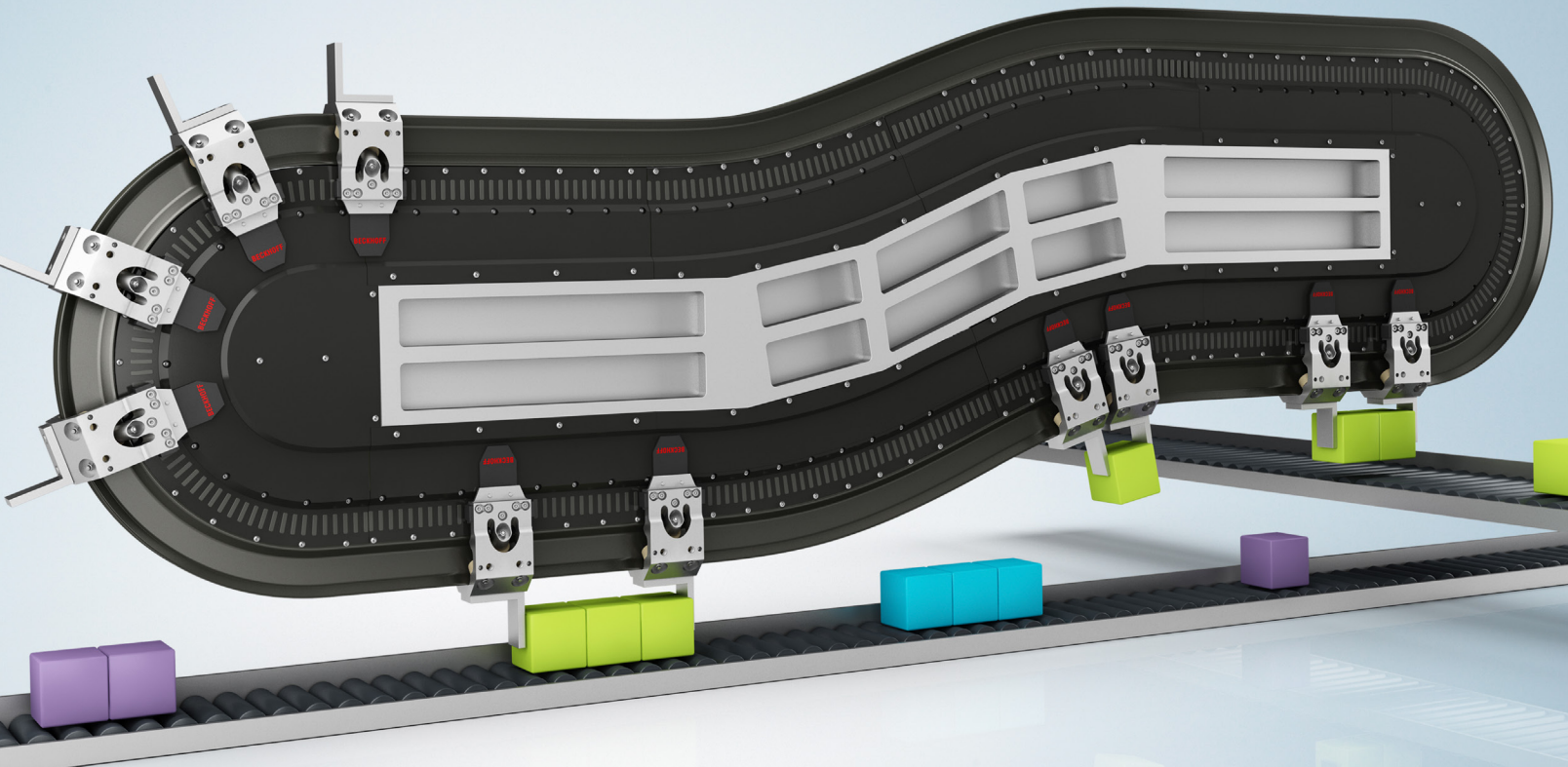




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Issue 6, Spring 2025



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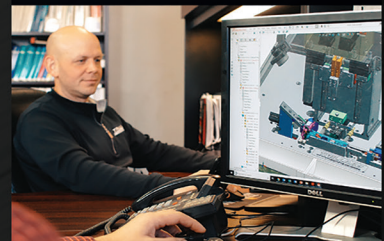
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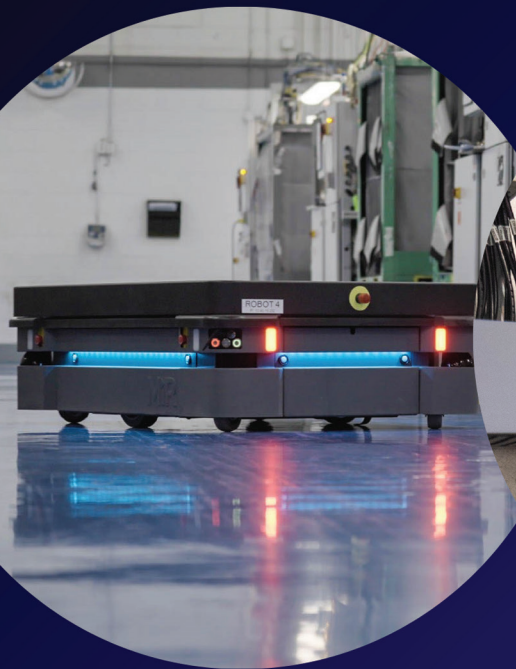
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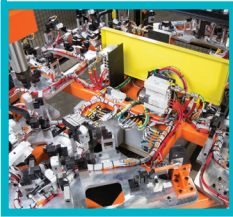


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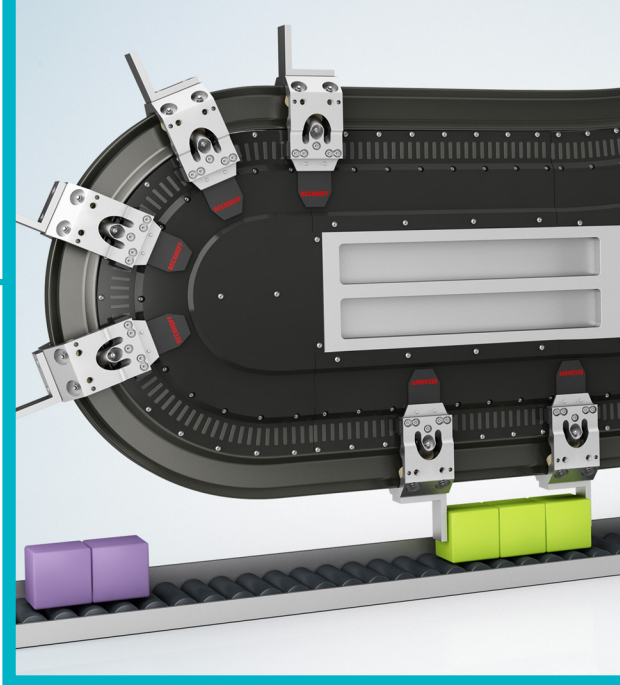
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Issue 6, Spring 2025

Published For: Automate Canada

Institute for Border Logistics and Security
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Windsor, Ontario N8W 0A6
Email: info@automatecanada.ca
Tel: (519) 818-8866

Published By: Matrix Group Publishing Inc.

Return all undeliverable addresses to:
309 Youville Street
Winnipeg, MB R2H 2S9
Toll-Free: (866) 999-1299
Toll-Free Fax: (866) 244-2544
sales@matrixgroupinc.net
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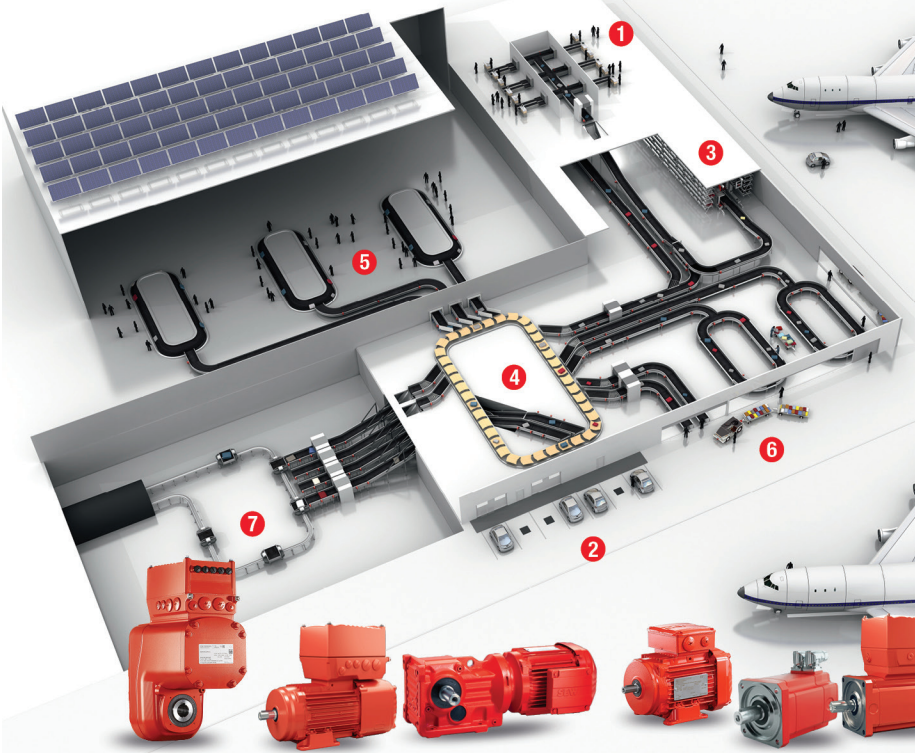
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Dave Fortin

Chair, Board of Directors
Automate Canada

Considerations to Mitigate the Impact of Tariffs

The supply chain

- a. Have alternative supply sources in other countries (U.S., Mexico) for key high value hardware that you use in your particular business. Buy from a Canadian/(U.S.) supplier if you're selling to a Canadian/(U.S.) customer.
- b. Have the customer free issue some hardware (i.e. robots). They buy the robots and you don't, but you assemble/integrate the robots to your machines on their floor.
- c. Say you're selling a machine to a Canadian customer—where possible, substitute U.S.-based products for European, Japanese, or Korean products as they will not have a tariff.

Efficiency / mindset

- d. Increase working capital (cash) in the business to weather payment disruptions or delays in getting projects complete.
- e. Find ways to be leaner. Can you reduce admin costs? Can you use artificial intelligence? Can you put systems in place to do more with less?
- f. Imagine if the U.S. and Canadian dollar when to PAR! Your U.S. input costs would effectively go up and your exchange would gain down. Would you be profitable? Would you be competitive? Why not? This is important to understand regardless of tariffs!
- g. In some cases, you may want to absorb the cost of the tariff (at least in the short-term) to keep the customer and to keep out a competing product and potentially lose the customer forever.
- h. Consider the impact of the exchange between CAD and USD. At the time of this writing, it is 1.45 CAD to 1 USD. This is 15% higher than the norm over the past few years. If you quoted the job with 1.30 base exchange in mind, then from that perspective the tariff is only really costing you about 10% more and maybe this can easily be absorbed in the short-term.

Customer strategy

- i. Diversify! Diversify! Diversify! While this is easier said than done, it's always a good idea to keep this strategy top of mind. Even more-so now! Don't just diversify by industry, but by country as well.
- j. Stay close to your key customers. People are still people and like to do business with those who they like and trust.

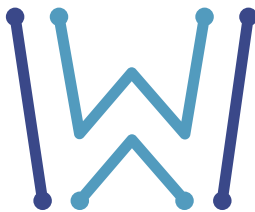
Pass costs forward

- k. Depending on the actual details of the tariffs, it may be possible to change the quote and/or invoice the customer to overvalue services or products with no tariffs and undervalue those with tariffs so that the price is the same for the customer in the end, but the tariffs are less.
- l. In some cases, the customer may be willing to pay the tariff if you have a very niche product. Count yourself very lucky if you do!

Transfer work

- m. Have a business incorporated in the U.S. and if necessary, in Mexico. Note that incorporating in Mexico is much more difficult as is banking and tax reporting, so give yourself several months to get this done.
 - n. If you have a U.S. facility then build products there for the U.S. market.
 - o. And finally, consider joining Automate Canada to get valuable peer-to-peer interactions, timely and useful information, as well as advocacy.
- I hope you found this informative. I would like to thank the various members of the board who helped me with some of these ideas. If you have any other ideas to add, email me at dfortin@datarealminc.com, and I will get it to our membership.

Share, Learn, Grow, (and Advocate). See you around!



When I started writing this message on February 3, 2025, we were on the eve of

expecting 25% tariffs on Canadian and Mexican goods and the start of a trade war. Wondering, "Will it happen?" Well... now it's the next day, February 4th and it has been deferred by 30 days, phew! Oh wait... it's now February 11 and the White House has announced a 25% tariff on steel and aluminum. Seems by the time we go to press, these back-and-forth decisions will make my message the length of an essay!

What will happen in April... who knows! May? Anyone's guess. And the months go on and on...

What we do know is that this tariff war will have a considerable impact on our automation industry. Most of our membership does business in the United States and if we do not do business directly in the U.S., then many or most of our customers certainly do.

Is there anything to be learned from this? Is there anything we can do in the future to protect ourselves from such disruption?

Certainly, we cannot control these outside events. The best we can do is mitigate their impact. Let's explore this topic...



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Nicole Vlanich
Executive Director
Automate Canada

One of our biggest achievements was the expansion of our membership, welcoming more industry leaders into our community and increasing our ability to advocate for the needs of automation companies.

Celebrating our Accomplishments and Looking Forward to 2025



As we reflect on 2024, I am incredibly proud of the strides Automate Canada has made in advancing the industrial automation sector in Canada. This past year has been a time of remarkable growth, innovation, and collaboration, strengthening our industry's position both nationally and globally.

One of our biggest achievements was the expansion of our membership, welcoming more industry leaders into our community and increasing our ability to advocate for the needs of automation companies. Our Strategic Plan set a clear direction for our work, ensuring that we continue to SHARE, LEARN, GROW, and ADVOCATE for the future of automation in Canada.

We successfully hosted our first EV Battery Cell Seminar, drawing over 100 professionals to discuss the evolving role of automation in battery manufacturing. This event was a testament to the power of knowledge sharing and industry collaboration, and it has set the stage for an even more ambitious lineup of events in 2025. This year, we are pleased to present our virtual Speaker Series with a new speaker each month who will provide valuable information and education to our members on topics such as government funding, new export opportunities, and cybersecurity.

Workforce development has remained at the forefront of our efforts, and we are committed to addressing labour shortages through meaningful initiatives. By partnering with educational institutions and government agencies, we are ensuring that the next generation of skilled automation professionals is equipped with the necessary training and opportunities to thrive in this ever-evolving field.

Looking ahead to 2025, Automate Canada will build on this momentum. Our upcoming Leadership Conference in June will provide an invaluable platform for business leaders to connect, learn, and strategize for the future. We will also strengthen our advocacy efforts, working closely with policymakers to push for more funding, investment incentives, and talent development programs that will drive the growth of automation in Canada.

As we step into the new year, I want to extend my heartfelt gratitude to our members, partners, and industry stakeholders for their unwavering support. Your commitment and collaboration are what make Automate Canada a thriving and dynamic organization. Together, we will continue to shape the future of automation and ensure that Canadian companies remain competitive on the global stage.

Thank you for being part of this journey. I look forward to another year of progress, innovation, and success.

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If you work at an Automate Canada member company, you can receive *Automate Canada Magazine* for free! Simply email distribution@matrixgroupinc.net to be added to the mailing list! If you have moved and need to update your address, please reach out as well.

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 (CMMM) 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.

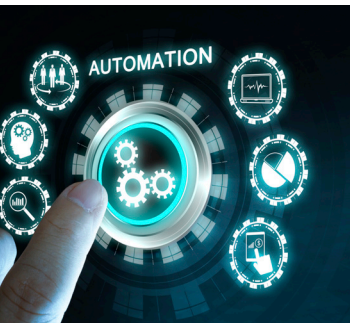
Automate Canada also embraces equality, diversity, and inclusion practices and provides information for our members to adopt these practices. We work with federal and provincial governments to advocate for the importance of skill development in our industry. We develop youth-focused initiatives and work 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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AUTOMATE CAM

2024 Year in Review & Strategic Plans for 2025

By Nicole Vlanich, Executive Director, Automate Canada



Automate Canada had a transformative year in 2024, marked by strategic growth, increased membership engagement, and new initiatives aimed at strengthening Canada's industrial automation sector. With a commitment to its mission of "SHARE, LEARN, GROW, ADVOCATE," Automate Canada worked to support members through educational opportunities, networking events, and advocacy efforts on key industry issues.

KEY ACCOMPLISHMENTS IN 2024

Membership growth and expanded industry representation

Automate Canada saw a significant increase in membership, bringing more automation companies, manufacturers,

and technology providers into its network. This growth allowed the organization to expand its advocacy efforts, provide more tailored resources, and facilitate stronger collaborations within the industry.

Strategic planning and organizational development

One of the major highlights of 2024 was the formalization of Automate Canada's Strategic Plan, which focuses on knowledge sharing, business development, and workforce training. This initiative reinforced the organization's commitment to fostering a strong, interconnected automation ecosystem across Canada.

Successful inaugural events and seminars

Automate Canada hosted the EV Battery Cell Seminar, which attracted over

100 industry professionals. This seminar focused on the role of automation in battery manufacturing and the evolving landscape of electric vehicle production. The event was met with overwhelming positive feedback and demonstrated Automate Canada's ability to bring key stakeholders together on pressing industry topics.

Workforce development and training initiatives

Recognizing the importance of skilled labour in the automation industry, Automate Canada played an active role in workforce development efforts, working closely with industry partners to support skills training programs. This included participation in government-led initiatives aimed at addressing labour shortages in manufacturing and automation.



CANADA:

Strengthened industry partnerships and collaborations

Throughout 2024, Automate Canada strengthened its partnerships with organizations. These collaborations have helped drive innovation, support government funding applications, and increase visibility for Canada's automation industry on a global scale.

Advocacy for automation and advanced manufacturing

Advocacy remained a top priority in 2024, with Automate Canada actively engaging with policymakers to highlight the importance of automation in economic growth. The organization addressed key challenges such as labour shortages, supply chain disruptions, and the need for increased investment in automation technologies. Several roundtable discussions and industry reports were published to support these efforts.

PLANS FOR 2025: EXPANDING IMPACT AND DRIVING INNOVATION

Building on the successes of 2024, Automate Canada is set to launch a series of ambitious initiatives in 2025 aimed

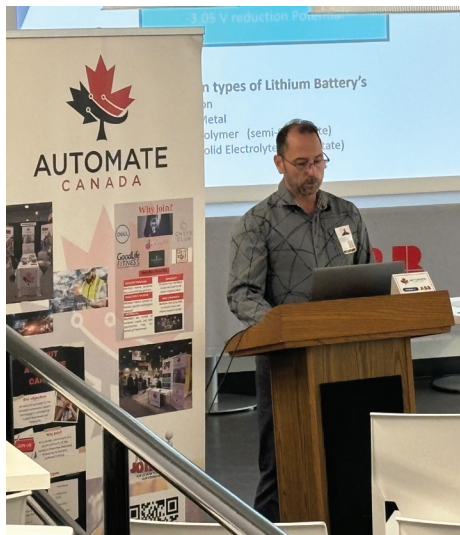


In 2024, Automate Canada did A LOT OF sharing, learning, growing, and advocating!

at further strengthening the automation sector, increasing member engagement, and advocating for policies that support technological advancement.

Expanded seminar and event series

Following the success of the EV Battery Cell Seminar, Automate Canada plans



to expand its educational offerings by hosting additional seminars in 2025. These seminars will focus on topics such as robotics, artificial intelligence in manufacturing, supply chain, and cybersecurity.

Additionally, Automate Canada will be hosting its second Leadership Conference in partnership with Manufacturing Automation in June 2025. This event will provide automation professionals with high-level insights into market trends, business

growth strategies, and technological advancements shaping the industry.

Workforce development and training expansion

In response to ongoing labour shortages, Automate Canada will continue to collaborate with educational institutions, government agencies, and private sector partners to enhance training programs for the next generation of automation professionals. The organization will support

initiatives focused on upskilling existing workers, attracting young talent, and increasing diversity within the industry.

Strengthening industry advocacy and policy engagement

Automate Canada will continue to work closely with government officials and industry stakeholders to push for policies that encourage investment in automation and advanced manufacturing. Key advocacy areas will include:

- Increased government funding for automation and robotics initiatives;
- Incentives for companies investing in smart manufacturing technologies; and
- Policies to address workforce challenges and talent retention.

Membership growth and engagement initiatives

To better serve its members, Automate Canada will continue to develop new member-exclusive benefits in 2025, such as:

- Access to an Industry Insights Report;
- More networking opportunities and member forums; and
- Tailored consulting services for companies looking to scale their automation operations.

Enhancing digital and marketing presence

Automate Canada recognizes the importance of digital engagement and plans to invest in a stronger online presence to keep members informed and attract new stakeholders to the automation community.

CONCLUSION: A BRIGHT FUTURE FOR AUTOMATION IN CANADA

With a solid foundation built in 2024, Automate Canada is well-positioned to lead the industry into a new era of growth and innovation in 2025. By focusing on education, advocacy, networking, and technological advancement, the organization will continue to play a vital role in shaping the future of automation in Canada.

As the automation landscape evolves, Automate Canada remains committed to supporting its members, fostering industry collaboration, and ensuring that Canadian companies remain competitive in the global market. 🇨🇦

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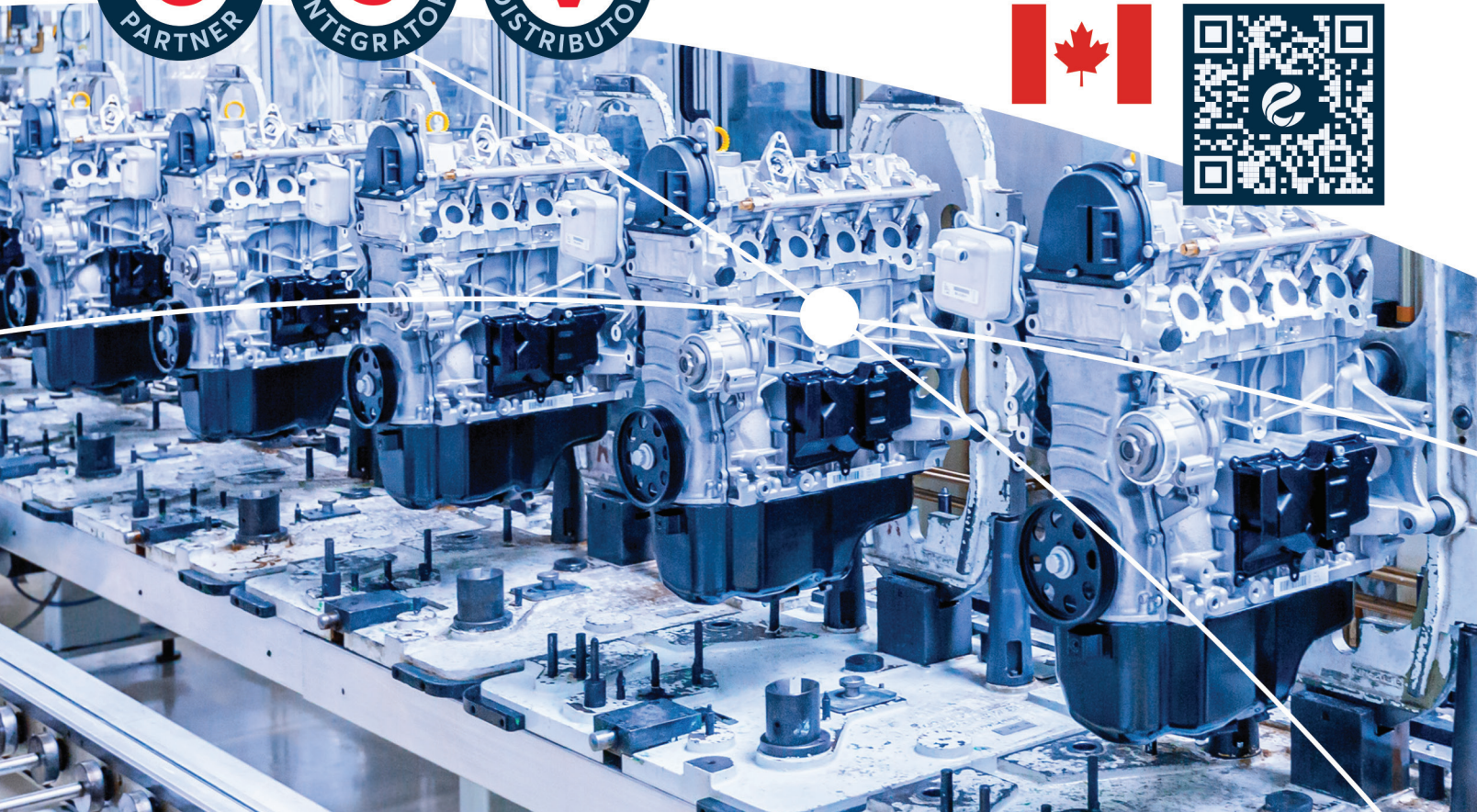
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UPSKILLING THE TO PREPARE FOR A MORE AUTOMATED FUTURE

Canada's largest publicly accessible Virtual Reality (VR) CAVE is a teaching, training, and research tool for the connected and autonomous vehicle development industry.

By Paul Adair, Staff Writer

Our region is well-known as a leader in the production of traditional vehicles, but we want to make sure that we also remain leaders in next-generation vehicle production through adopting the latest technologies and innovations and promoting Windsor-Essex's premier capabilities to the rest of Ontario, Canada, and beyond.

Invest WindsorEssex (IWE) is the regional economic development agency for the City of Windsor and County of Essex. The region is home to an established hub of automobility and advanced manufacturing excellence. The overarching mandate of IWE, a non-profit organization, is to attract new companies to set up in the region, help companies thrive and grow, and bring in new investments and job opportunities to Windsor-Essex, Ont.

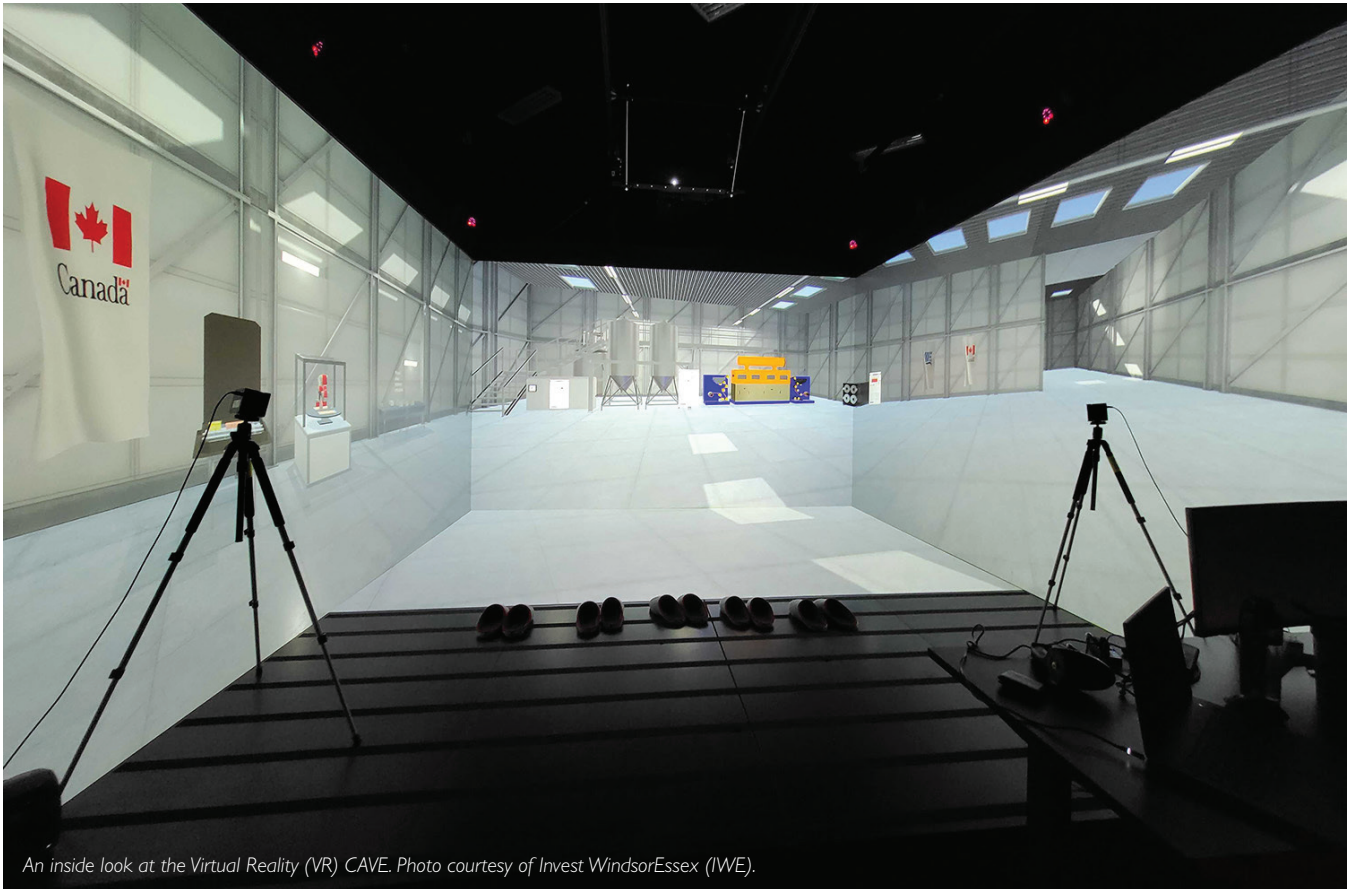
Established in 2017, the IWE Automobility and Innovation Centre (AIC) is the most recent addition to the organization. By offering a variety of resources and programs that help companies achieve their goals, AIC conducts non-traditional economic development for small- and medium-businesses (SMEs), as well as provides training to support upskilling for the next generation of zero-emission vehicles.

"We define automobility as the secure, zero-emission movement of people, goods,

and services using advanced information technologies," says the Automobility and Innovation Centre's Executive Director, Edward Dawson. "So, it's all the technology that goes into making the next generation of vehicles. Our region is well-known as a leader in the production of traditional vehicles, but we want to make sure that we also remain leaders in next-generation vehicle production through adopting the latest technologies and innovations and promoting Windsor-Essex's premier capabilities to the rest of Ontario, Canada, and beyond.

The first level of support received by IWE's AIC was provided through the Autonomous Vehicle Innovation Network (AVIN) funded by the Province of Ontario and administered by the Ontario Centre of Innovation, to allow for the creation of the Windsor-Essex Regional Technology Development Site. This allowed the department to develop Canada's largest publicly accessible Virtual Reality (VR) CAVE and provide access to state-of-the-art

E WORKFORCE



An inside look at the Virtual Reality (VR) CAVE. Photo courtesy of Invest WindsorEssex (IWE).

technologies supporting new innovations being developed by companies working on zero emission vehicle technologies. In the years since, IWE's AIC has continued to expand its services and outreach thanks to continued support from the Ontario Vehicle Innovation Network (OVIN) (a new iteration of the AVIN program) as well as further support from the Federal Government of Canada to back an automobility entrepreneurship strategy through the Federal Economic Development Agency for Southern Ontario.

Making virtual reality real

Located at AIC, the IWE VR CAVE and newly established VR Lab provides an immersive and active virtual reality environment fully integrated with state-of-the-art hardware and software. The

facility serves as a teaching, training, and research tool for the connected and autonomous vehicle development industry.

The use of VR has evolved into a powerful tool that today provides opportunities to aid in product development, including (but not limited to) simulation, skills training, communication, and collaboration. What's more, virtual prototyping allows products and processes to be tested before final verification with physical prototypes is performed and, because of government grant funding, IWE's AIC has been able to provide its VR services at no cost to a diverse range of startups and SMEs to support the development of their technologies.

"When we started this journey, it was essentially for product development – some people needed VR and some people just

needed the software for simulation, where we would do the demonstrations," says Dawson. "However, one of the things we kept hearing was how VR would be great for training, and this put us on another pathway with this technology and building upon it and us providing our expertise to help facilitate virtual reality training."

Today, their VR facilities are proving to be highly advantageous for companies that work with AIC, from companies developing powertrains to companies working on developing micro mobility solutions. Some of the advanced manufacturers in the area are also benefitting from VR by replicating digital twins of their products and processes, allowing them to look at them in VR and make changes quickly and cost effectively before moving those changes into the real world.

Taking the show on the road

While the first iteration of the IWE VR CAVE has required users to be in the physical space at the AIC, the program has evolved to provide support beyond the boundaries of the Windsor-Essex region to help companies across the province of Ontario.

"We wanted to find a way to take VR out of the CAVE and take it to the next level," says Dawson. "So, we partnered with a company called Virtualware, which allows us to essentially work in real-time from anywhere, whether you're on a headset, in the IWE VR CAVE or VR Lab, or even behind a computer screen to be in the same environment iterating together or training together. It has really opened up doors for us to help so many more companies because it's taken away the need to always physically be in the space here to utilize some of the technologies."

The AIC is currently running a new upskilling program for the battery manufacturing sector that incorporates VR technology, allowing users to safely provide virtual training and run through

scenarios before skills are taken out into the real world. Battery Boost is an innovative training program funded by Upskill Canada [powered by Palette Skills] and the Government of Canada. Administered by Invest WindsorEssex with delivery support from NextStar Energy, this program is designed to prepare participants for careers that include Product and Process Technicians in electric vehicle (EV) battery manufacturing. Through advanced virtual reality simulations, participants gain hands-on, job-specific training that equips them with the skills needed to thrive in Canada's rapidly growing EV battery manufacturing sector. This novel approach to training is an application of VR that Invest WindsorEssex believes is on the cusp of catching on more mainstream.

"Everybody is getting really excited about training in this virtual environment," says Jessica McCarthy, Talent Attraction Specialist at Invest WindsorEssex. "We've set training programs up specifically to have a direct pathway to a position in the electric vehicle supply chain. It is so

beneficial for people to get the chance to train and learn about all of the new components that are not part of traditional automotive manufacturing."

Looking ahead

Adopting technologies like virtual reality is becoming increasingly important for companies looking to secure the next generation of technical talent. More and more, students are entering the workforce with not only a comfort with technology, but an expectation that these kinds of cutting-edge tools are available in the workplace – whatever industry that might be.

"The more people get to see what we're working on, the more they are saying, 'Hey, I'd like to get in on that,'" says Dawson. "Every time we work with someone, they see the value and potential of VR and want to find ways to incorporate it into their operations in some way. Virtual Reality is really sector agnostic, and that is going to open up doors to show other industries how they can benefit from VR training, and it's exciting to be part of that." 🍁



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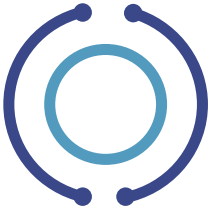
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AUTOMATION MEETS A FOCUS ON COMMUNITY

Not only will NextStar Energy's new operations supply EV batteries to Stellantis, the venture will also employ 2,500 people from the Windsor area, while investing in training for the next generation of workers.

By Rich Cowan, Staff Writer



One of the biggest stories coming out of Windsor, Ontario right now involves NextStar Energy. LG Energy Solution Ltd., a leading battery manufacturer, and Stellantis, a leading global automaker, formed NextStar Energy through a joint venture in 2022, due to the need to produce top quality electric vehicle (EV) batteries exclusively for Stellantis, as demand requires.

They are now in the process of getting their all-encompassing battery production facility fully operational.

The plant sits on a massive 226 acres of land and features two main buildings, one for battery cell manufacturing, and the other to produce battery modules. Having the two production buildings on the same site will provide a much more efficient way of supplying Stellantis with the batteries they need. The battery module plant has been up and running since October 2024, and the battery cell building is projected to be operational in Q3 of 2025.

The battery cells are currently produced at the LG factory in Poland, but once the cell plant in Windsor is operational, the plant's battery output will be much more efficient.

The NextStar Energy plant is the first and currently only one of its kind in Canada, and it employs the very latest in technology. According to Planning Director, Sung Park, "Our factory has the latest equipment and technology. Once fully operational, the plant will be able to produce up to 49.5 gigawatt-hours of power per year." He goes on to say, "The batteries we are producing are the most advanced batteries available, with the most energy capacity."

The technology is coming from LG Energy Solution Ltd., which is a top player in the EV battery market. Park adds, "As a joint

venture between LG Energy Solution and Stellantis, NextStar gets the latest technology from them."

One of the primary production efficiencies NextStar will benefit from is that Stellantis requires only one type of battery from this location. While other battery manufacturing facilities are producing a variety of batteries, NextStar will not have this challenge. For example, the LG plant in Poland produces "over 20 different kinds of batteries in the one plant," according to Park.

Another efficiency for the plant is that it will be 100% automated. "NextStar is the first factory to go with 100% automation for the module production," says Park. "Not a hand needs to touch any part of the manufacturing process. It's all automated."

This full automation enables the company to employ their people in other areas within the production process, and not in the mundane tasks of working on the production line. That aspect is fully covered by the latest technology in the EV battery industry.

The efficiency that this automation of the entire battery manufacturing process will have, along with the two stages of production being located on the same property, will provide Stellantis with a steady supply of EV batteries. While the majority of battery manufacturing is currently found in Asia, NextStar will now be able to supply the demand from right here in Canada.

Aside from the sound model of battery production that NextStar can implement, there is another benefit that the plant provides that Park and the company are exceptionally proud of and excited for – the ongoing and ultimately positive benefits that the plant will have on the surrounding community.

An effective model of the impact that a plant can have on the surrounding community can be found in Wroclaw, Poland, the location of the LG battery plant that currently supplies Stellantis.

The completed battery module plant, which has been operational since October 2024, and the battery cell building, which is projected to be operational in Q3 of 2025. Photos courtesy of NextStar Energy.



Once an empty plot of land, the 226-acre development now features two main buildings.



On its way up!

According to Park, "LG invited 20 suppliers to go to Poland and the city has now become the hub of EV manufacturing in Europe. NextStar wants to do the same thing in Windsor." He adds, "Wroclaw is the only city in Poland that is experiencing growth."

to Stellantis. The joint venture between LG Energy Solution Ltd. and Stellantis is off to a promising start, and its impact is set to grow as the EV industry continues to expand.

The technology and automation being used, as well as the venture's commitment to the community, will help ensure long-term success for everyone involved. 🍁

Park anticipates comparable and sustainable economic growth for the Windsor area, as well as Ontario and even Canada by extension.

Once the battery cell building is fully operational alongside the module building, NextStar will employ 2,500 workers from the area. In addition, the various suppliers that are coming into the region will add to that number. Park says, "Three suppliers are coming from Korea to the area, along with many other suppliers from elsewhere." These factors should provide a substantial economic boost to the region.

Along with the economic benefits for the area and the local population, NextStar is also investing in preparing for the future. Park explains that the company is "working with St. Clair College to create training courses in battery production." He adds, "We also have a partnership with Invest WindsorEssex with the Battery Boost: Technical Training for Battery Manufacturing Careers program, featuring a virtual reality (VR) training room."

This program will arm future generations of workers with the skills necessary to succeed in the battery manufacturing industry. NextStar also employs co-op students from the University of Windsor.

NextStar is providing a viable source of EV battery production to a market with a growing need for it, while being a reliable supplier



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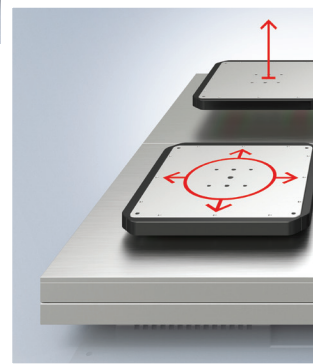
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Beckhoff offers a comprehensive range of automation solutions, including industrial PCs, EtherCAT terminals, drive technology, HMI, and software, for diverse applications spanning various industries. Photos courtesy of Beckhoff Canada.



By Rich Cowan, Staff Writer

Beckhoff Canada, located in Cambridge, Ontario, with offices in Laval, Quebec, and Burnaby, British Columbia, has had a substantial presence in Canada for more than two decades. In 2001, Beckhoff USA began representation in Canada, and in 2017 the Canadian subsidiary was formed.

According to Calvin Wallace, President and Managing Director of Beckhoff Canada, "In 2017, we transitioned from reporting to Beckhoff USA to becoming our own subsidiary reporting directly to Germany."

Since then, Beckhoff Canada has grown from eight to 37 employees, which is a substantial amount of growth over that time frame. The global impact of Beckhoff has been equally impressive. It is a two billion Euro, family-owned private company, which produces industrial PCs, I/O and fieldbus components, drive technology, and hardware for machine vision with a reach throughout the world. Wallace has been President and Managing Director of the Canadian subsidiary since April 2018, leading it through an impressive amount of growth.

From the beginning, Beckhoff has set itself up to be a market leader in the automation industry. Hans Beckhoff, the founder of the parent company in Germany came up with a universal automation/control system using PC-based control and EtherCAT (ethernet for control automation technology).

"That is the main difference between us. We compete daily with traditional control systems," says Wallace. "Competitors are using traditional PLC control, where we use PC-based control systems that allow us to leverage the power and cost point of an industrial PC."

This makes the company's control systems much more efficient, with a cost to performance ratio that works very much in Beckhoff's favour. The PC-based platform also enables them to add several

Windows-based applications, allowing for much broader usage along with a much more streamlined process. Wallace mentions that "40% of machinery or lines have a PLC and a PC. We're able to do that all in one."

Beckhoff Canada's success has much to do with the fact that "99% of applications out there can be controlled by our control system," says Wallace. Because of this, the company is able to deal with many industries, from traditional machine building to the most advanced in stage and show. Wallace adds, "I like to use the phrase 'technology provider to pretty much all industries,' with the exception of nuclear."

The company's direct-to-consumer approach, along with having application engineers local to customers, is a must for the company. Wallace notes that, "These systems can be highly complex, and our customers rely on the extensive support and services we provide."

While Beckhoff Canada's history has been impressive, the future looks even brighter. With continued increases in the power of PCs and multicore processors allowing for more flexibility, Beckhoff is well-positioned to expand even more in the automation and control industry. Coupled with that is the growing trend toward artificial intelligence (AI). Because of Beckhoff's PC-based systems, "We have the unique ability to do precise measurements that others do not have. This allows for better integration," explains Wallace. "Leading end-users are leaning towards AI."

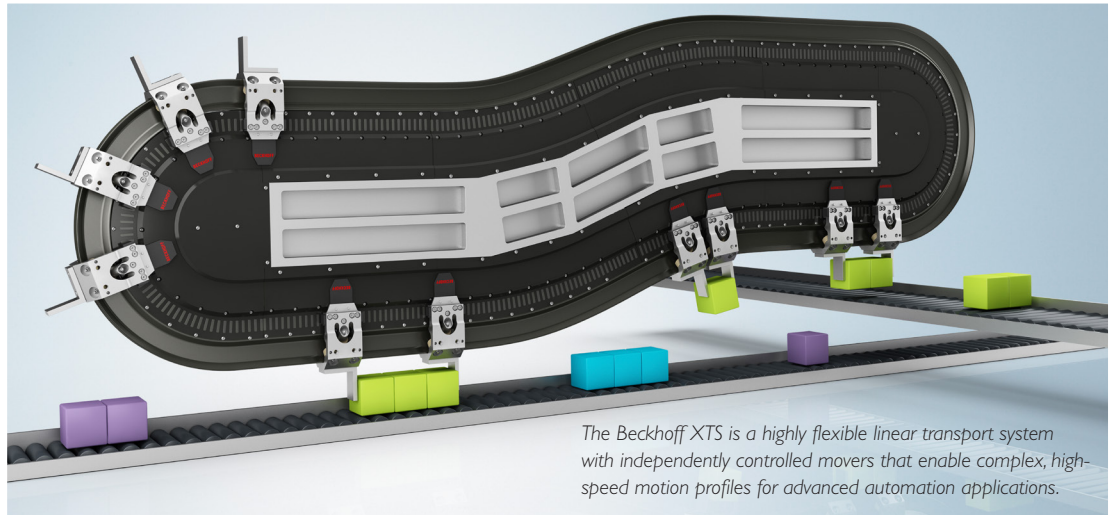
Being at the forefront of automation innovation, Beckhoff has also developed what they refer to as the MX system. This is control cabinet-free, plug-and-produce automation, which as Wallace notes, "delivers maximum space and time savings for machine builders and end users."

When asked what makes the next few years exciting for Beckhoff, Wallace says, "It all comes down to the universal system

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that we have with PC-based control, EtherCAT, and TwinCAT automation software."

Beckhoff Canada's membership with Automate Canada has proven to be substantially beneficial. Wallace explains that some of the many benefits include the fact that they work very hard to canvass on behalf of the industry, giving a powerful voice to the individual companies in the market. "Automate Canada gives us all a voice in the broader community as well as with the many levels of government."

He adds, "The association also provides opportunities to make connections within the industry. For us, it has been great to network with business leaders in different areas."

This is tremendously important to Beckhoff Canada and many other companies. It enables and initiates "really good collaboration, helping each other to be more successful." In Wallace's experience, "Collaboration is more than just saying the word – it's about bringing people together at meetings and conferences, which is useful and beneficial for everyone. Automate Canada events are some of the better events that I've attended."

Throughout its history, Beckhoff Canada has proven to have a very successful and impressive track record. They have grown largely due to their open-based, PC-based control technology and TwinCAT automation software. Because of these essentials, and their drive to keep developing technologies that will make an impact, the company is at the forefront of ongoing technology growth within the automation world, and they look to the future with optimism. 🍁

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Ro-Matt's rotary moulding line. Photos courtesy of Ro-Matt International.



Ro-Matt's robotic spot welding cell.

DEDICATED SERVICE, TECHNICAL EXPERTISE, AND PROBLEM SOLVING

By Rich Cowan, Staff Writer

For Ro-Matt International Inc., change is a part of doing business and innovation is at the forefront of its business model. Founded in 1980, the company is a member of a larger family-owned group of companies that has been serving the metalworking and automotive industries since 1929. Operating out of a 40,000 square foot engineering and manufacturing facility located in Oldcastle, Ontario, the company is 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.

While the automotive sector was the company's first focus, expansion to other industries has been a key driver in recent

years. This diversification includes adhesives, laser cutting, different types of welding and fastening methods, among others. Ro-Matt has also been pushing the technology in these areas, along with the implementation of robotics in manufacturing processes.

Ro-Matt President Steven Del Duca says, "Perhaps the biggest shift in our business has been to not divest, but rather to invest in different types of industries. We've been looking at non-traditional manufacturing industries to adopt automation and mechanization."

Much of this new investment has gone into the areas of heavy fabrication and production, as well as off-site construction. This latter area comes with a variety of challenges for manufacturers, including the general lack of a skilled workforce. Ro-Matt addresses many of the challenges through the implementation of equipment,

automation, and robotics in order to "redeploy the labour to do different jobs that are more articulate, where the skilled trades are necessary," says Del Duca.

While the automation of manufacturing in the heavy and off-site construction arenas may seem a relatively large step from the automotive industry, Del Duca explains, "It's the same type of scenario that we worked on in the automotive industry. The process is pretty much identical."

The primary difference, he notes, is one of scale; building manufacturing requirements are simply much larger. Advances in robotics and automation have adapted to the challenges of scale, however, and have initiated much in the way of new ways of doing things out of need. Del Duca says, "There is a constant evolution in the processes. We can do implementation in stages as the needs (of the customer) grow."

NAL INC.

Because Ro-Matt has established a track record of success in the automation of heavy construction, although the implementation of this is still relatively new, "We are now winning the confidence of the client. Risk isn't as risky," says Del Duca.

What also helps is that clients are coming to Ro-Matt for help solving manufacturing challenges – the come with a problem and Ro-Matt helps find a solution. This is what drives advances in automation and, according to Del Duca, "Ideas brought forward by clients are pushing us forward to develop new solutions for them. You come to us with a problem, we'll come up with the solution, so the industry is driving us to think outside the box and adopt new technologies." He goes on, "We're busy trying to address the customer's needs rather than developing technology and looking for a customer who can use it."

Artificial intelligence (AI) is another frontier that is in the early stages in many areas of manufacturing and production. While initiating AI into robotics is not as readily available as CAD/CAM and CNC machines, there have been several advances in the use of AI. Largely, there is "no more manual programming," explains Del Duca. "We are letting AI figure out the most efficient ways to get things done." Advances on this front will continue to be implemented as the technologies continue to adapt.

Ro-Matt plans to continue to diversify and grow as needs in manufacturing technologies keep coming up. Remaining at the forefront of technological innovation will be key to the ongoing growth and advancement of the uses of automation in manufacturing processes. Ro-Matt is dedicated to allowing needs within the various industries they serve to continue to drive them forward in innovation. As Del Duca states, "The client is the one pushing for solutions, allowing us to evolve." This model will continue to bring out new methodologies in manufacturing.

Automate Canada has been incredibly helpful in the growth and success of Ro-Matt International Inc. Del Duca has been involved and influential with the association since the very beginning and has been a part of the organization at various levels, including having formerly served as Vice Chair, and being on the Board of Directors.

Del Duca mentions some of the membership benefits he's experienced include, "networking, technology, and problem solving together. There is the realization that you're not alone."

Automate Canada is also helping to unify the industry. "We now have a voice. We

now have a platform to discuss things with various levels of government. Our causes are not just falling on deaf ears."

Ro-Matt International has been continuously making strides in the automation industry throughout its 40-year history. With its model for success and ongoing technological advancements, along with its willingness to diversify as needs arise, the company will continue to grow, adapt, and improve within the manufacturing sector for many years to come. 🍁

For more details: www.ro-matt.com

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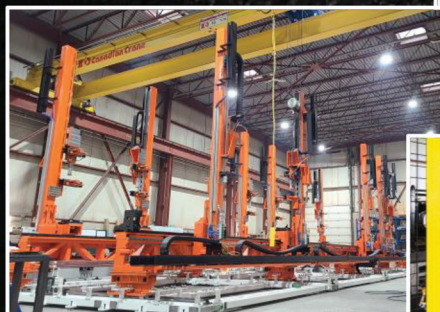
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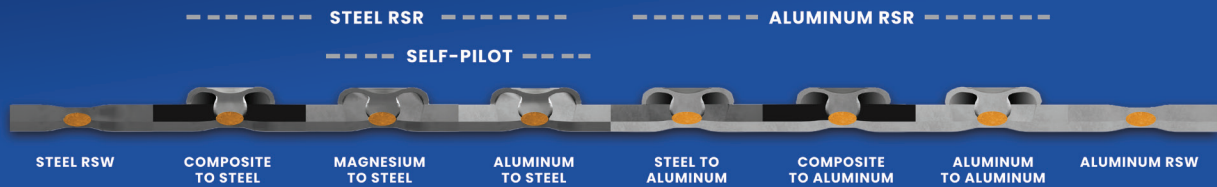
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