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The official magazine of Automate Canada.

Issue 3, Fall 2023

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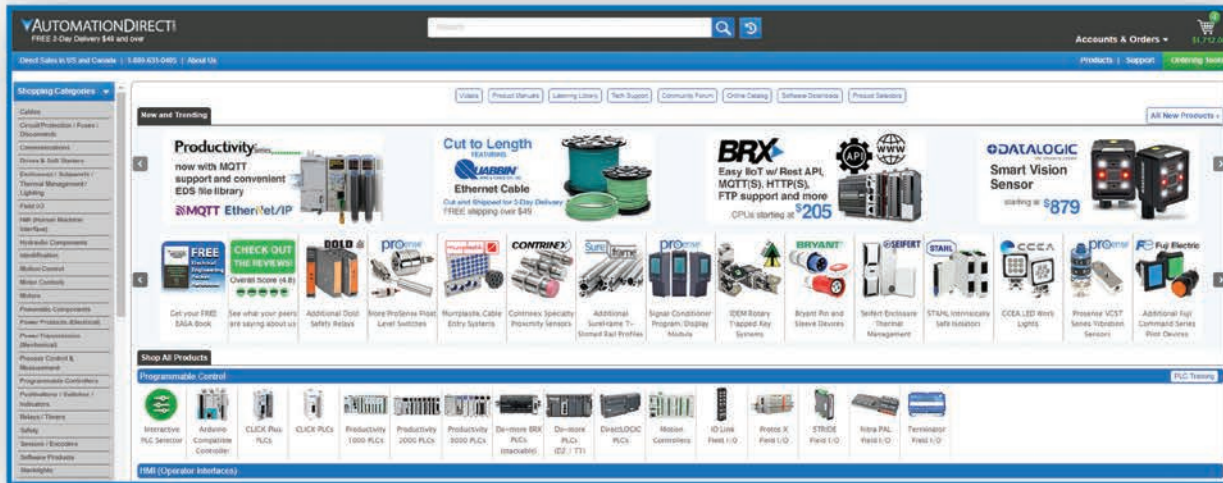
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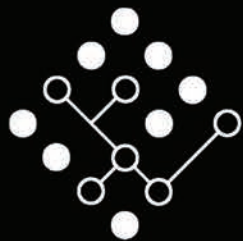
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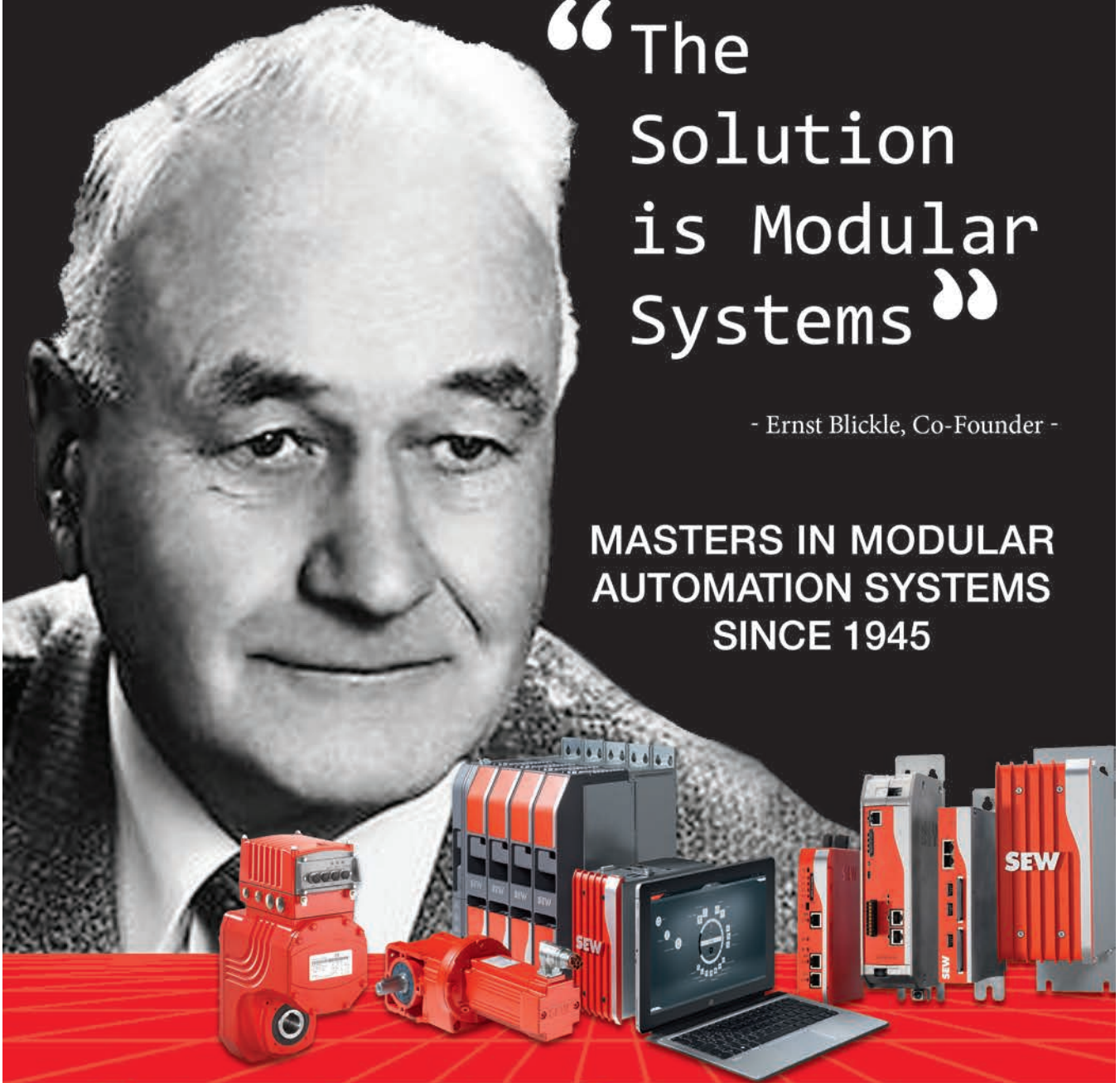
James Robinson

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Dave Fortin
Chair, Board of Directors
Automate Canada

Greetings from the Chair of Automate Canada

These are indeed interesting times, to say the least. This is the year that AI (ChatGPT in particular) jolted the world to really take notice of AI. I cannot remember when one piece of technology had such a sudden and profound impact as did ChatGPT! We are still here in the summer of 2023 wondering what jobs it will replace or whose job it will impact next! The rate of new generative AI-type applications coming out is astounding!

This is also a year with unprecedented heat, wildfires, housing prices that are out of control, inflation and interest rates in flux, labour shortages, war in Ukraine, U.S. politics (omg!) – it all seems a bit chaotic and depressing! It reminds me of that Billy Joel song...“We didn’t start the fire!” FYI, speaking of wildfires, I am writing this editorial amidst the beauty of the Alberta Rockies (in Canmore), and I am still amazed at the size and breadth of our country. It seems that there is opportunity everywhere.

One very bright spot for our association and its members is the resurgence of

manufacturing and an increasing need (in almost all industries) for robotics and automation. There is a greater need now, than ever before, for our expertise, products, and services! With the pandemic well behind us, Automate Canada is poised to grow significantly in the years to come. Part of achieving that growth will depend on our current members (yes, that means you) to find at least one of your Canadian partners, competitors*, or suppliers to join our organization. (*Most of us have few Canadian competitors anyway).

I personally feel that Automate Canada can provide great value to its membership if we are all willing to share a little bit of our wisdom, some of our best practices, and our success stories and even our greatest failures and mishaps. If you can learn one useful thing a year, or make one new customer or develop one new partnership or find one money saving idea or one valuable piece of wisdom, then the cost of your invested time and membership in Automate Canada will be well worthwhile.

SHARE. LEARN. GROW! That’s how I see it!
See you around!

I PERSONALLY FEEL
THAT AUTOMATE
CANADA CAN
PROVIDE GREAT
VALUE TO ITS
MEMBERSHIP IF WE
ARE ALL WILLING TO
SHARE A LITTLE BIT
OF OUR WISDOM.

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.



Nicole Vlanich
Executive Director
Automate Canada

It is with great pleasure that I introduce the third edition of our magazine, *Automate Canada Magazine*. What a testament to our dedication to providing informative and captivating content that deeply resonates with both

our esteemed members and the wider industry. As we navigate the ever-evolving landscape before us, I am proud to share the impressive progress we have made in 2023, and the exciting initiatives that lie ahead.

Within the pages of each magazine issue, our primary objective is to cultivate awareness of critical topics that hold significance for our valued members. Our commitment lies in shedding a focused light on emerging trends that are shaping the industry and uncovering their far-reaching impact across diverse sectors. We look to the latest advancements in industrial automation and offer insights into prospective challenges and opportunities on the horizon. Our unwavering commitment remains centered on ensuring that our members are well-informed about the trends that hold paramount importance. We also take pride in highlighting the accomplishments

Greetings from the Executive Director of Automate Canada

of our member companies that wield significant influence in the industry.

Industrial automation stands as a pivotal pillar of modern industry, fundamentally transforming the landscape of manufacturing, production, and operations. Its significance surpasses mere efficiency gains; it encompasses heightened precision, elevated safety measures, and accelerated innovation. Through mechanization and streamlined processes, industrial automation mitigates variability and high-quality output. Furthermore, automation empowers us to explore frontiers that were once deemed unattainable, pushing the boundaries of what can be achieved in terms of speed, complexity, and scale. As industries continue to evolve, the implementation of automation transcends being a mere competitive advantage – it is now a strategic imperative. It equips us to remain agile in the face of a rapidly changing world, while concurrently enhancing productivity, fostering sustainability, and shaping the trajectory of global manufacturing.

The Canadian automation sector emerges as a potent force within the nation's industrial landscape, fortified by compelling statistics that underscore its profound impact. Recent data showcases a steady rise in the Canadian manufacturing industry's adoption of automation, with an impressive 42 per cent growth in industrial robot installations over the past five years. This surge in automation technology translates to notable efficiency gains, with manufacturers reporting up to a 20 per cent reduction in production costs and a marked improvement in overall output quality. Additionally, projections indicate that the Canadian industrial automation market will maintain its upward trajectory, with an estimated compound annual growth rate (CAGR) of approximately eight per cent over the next five years. This growth can be

attributed to the seamless integration of Industry 4.0 technologies, such as Internet of Things (IoT) and artificial intelligence (AI), into industrial processes, consequently driving innovation and fostering competitive advantage across sectors. These statistics eloquently illustrate that the Canadian automation sector is not only flourishing but also significantly shaping the future of the industry through its transformative influence.

As a membership association, our goal is to ensure that we are providing the content, services, programs, and opportunities that our members need. Some of our current initiatives include bringing members together to share successes, challenges, and best practices, providing learning opportunities, and connecting businesses with opportunities. We rely on the feedback of our members and industry to assist us in our strategic priorities to ensure that we are providing the answers our members need and facilitating valuable connections. We have had a successful 2023, with an increase in activity, a successful AGM, a growing membership, and continued dedication to further growth and success, for our association and member companies.

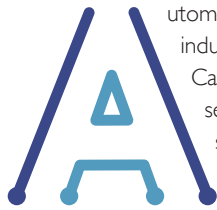
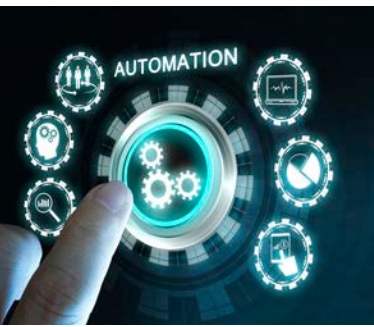
None of our accomplishments could have been achieved without the unwavering support we receive from our esteemed members, dedicated Board of Directors, and valued partners. Your enthusiasm, active participation, and unwavering dedication drive our relentless pursuit of excellence and we extend our gratitude for accompanying us on this journey. As we set our sights on the horizon, I am filled with anticipation as we embark on uncharted territories, broaden our horizons, and introduce our members to a wealth of value-added services, benefits, and content.

Warm regards.



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 (CAMM) 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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MODERNIZING MANUFACTURING

Whether you're just jumping in or far along on your automation journey, the destination is worth the drive.

By Nicole Vlanich, Executive Director of Automate Canada

In the dynamic realm of manufacturing, the urgency for modernization has never been more pronounced. As industries continue to evolve, manufacturers find themselves compelled to adapt to the shifting landscape to retain their competitive edge and increase productivity. The convergence of cutting-edge technologies, such as data analytics, artificial intelligence, and automation, has unlocked a realm of possibilities for enterprises seeking to revamp their legacy systems and revolutionize their operations.

This article will delve into the core facets of modernizing manufacturing, exploring the advantages of data accumulation, predictive maintenance, software revitalization, assimilating artificial intelligence (AI), and automating processes. Whether an organization is embarking on its modernization journey or is already in motion, this piece will provide actionable

insights to steer successful modernization endeavours.

The potency of data collection

In the era of Industry 4.0, data has assumed a paramount role in modern manufacturing. Traditional manufacturing heavily relied on manual data input and sporadic reporting, resulting in inefficiencies, inaccuracies, time consumption, and missed prospects. The integration of sensors, Internet of Things (IoT) devices, and interconnected machinery has fundamentally transformed data collection, enabling manufacturers to seize real-time insights into their operations. This wealth of data can be harnessed to optimize processes, enrich decision-making, and elevate overall efficiency.

Employing data analytics tools empowers manufacturers to unveil patterns, trends, and anomalies that were previously concealed. These insights facilitate well-informed decision-making, aiding companies in identifying areas

necessitating improvement, streamlining workflows, and curtailing downtime. The revelations provided by data-driven insights also lay the foundation for predictive maintenance strategies, a pivotal component in the process of modernizing manufacturing.

Predictive maintenance: Pioneering proactive preservation

Predictive maintenance harnesses data and analytics to predict when machinery is likely to malfunction, enabling manufacturers to undertake maintenance in a proactive manner as opposed to reacting post-failure. This approach minimizes unscheduled downtime, slashes maintenance expenditures, and elongates equipment lifespans. By integrating sensors and data analysis tools, manufacturers can constantly monitor their machinery's health and receive alerts regarding necessary maintenance.

Predictive maintenance not only optimizes operational efficiency but also

BY AUTOMATING REPETITIVE PROCESSES, MANUFACTURERS CAN ALLOCATE THEIR WORKFORCE TO ROLES DEMANDING CREATIVITY, PROBLEM-SOLVING, AND CRITICAL THINKING.

heightens worker safety. By addressing potential problems before they escalate, manufacturers can foster a safer working environment and mitigate the hazards linked with sudden equipment breakdowns.

Revamping software infrastructure

In addition to hardware upgrades, modernizing manufacturing necessitates a revamp of software systems. Numerous legacy manufacturing systems rely on obsolete software that lacks compatibility with contemporary technologies. This can lead to operational impediments, security vulnerabilities, and restricted integration capabilities.

Upgrading software infrastructure empowers manufacturers to leverage the complete potential of emerging technologies. Cloud-based solutions, for instance, facilitate seamless data exchange across departments and locations, intensifying collaboration, and decision-making. Moreover, state-of-the-art software platforms offer augmented cybersecurity features to shield sensitive data from cyber threats.

Integrating artificial intelligence

Artificial intelligence has emerged as a transformative force in modern manufacturing. By scrutinizing colossal datasets, AI algorithms can unearth patterns, optimize processes, and make predictions with unparalleled precision. Manufacturers can harness AI for a myriad of tasks, ranging from quality control and demand forecasting to supply chain optimization and customer relationship management.

Quality control, an integral facet of manufacturing, reaps substantial benefits from AI integration. AI-powered visual inspection systems can swiftly identify defects,

guaranteeing that only premium products reach consumers. This augmentation not only heightens customer contentment but also curtails waste and its associated costs.

AI-fueled demand forecasting empowers manufacturers to anticipate market trends and tweak production correspondingly, minimizing surplus or shortages. Furthermore, AI-enhanced supply chain management optimizes inventory levels, transportation routes, and supplier affiliations, culminating in cost savings and refined delivery timelines.

Process automation: Streamlining efficiency

Automation has long been a hallmark of modern manufacturing, and recent advancements have elevated it to unprecedented heights. Robotic process automation (RPA), coupled with AI, presents manufacturers with an opportunity to streamline both routine and intricate tasks. By automating repetitive processes, manufacturers can allocate their workforce to roles demanding creativity, problem-solving, and critical thinking.

Manufacturers can deploy automation across diverse stages of production, from assembly lines to logistics. Collaborative robots, colloquially termed cobots, collaborate with human operators to execute intricate tasks, augmenting productivity and diminishing the likelihood of human errors. The outcome is not solely refined efficiency but also diminished operational expenditures and amplified consistency in output.

Commencing and sustaining the modernization odyssey

Embarking on the modernization journey can be an intimidating endeavour, particularly for manufacturers operating on entrenched legacy systems. Nonetheless, the advantages

far overshadow the challenges. Initiating the journey entails manufacturers conducting an exhaustive evaluation of their existing infrastructure and pinpointing areas necessitating immediate attention. This might involve retrofitting machinery with sensors, upgrading software systems, or initiating rudimentary automation.

Collaboration between IT and operational teams proves pivotal in ensuring a seamless transition. IT teams furnish the technical expertise requisite for integrating new technologies, while operational teams contribute insights into the pragmatic facets of production processes. Effective communication and training are imperative to ensure the entire workforce embraces the changes and effectively harnesses the novel technologies.

Sustaining the modernization expedition necessitates a commitment to perpetual improvement. Manufacturers ought to remain attuned to the latest technological breakthroughs and industry trends. Regularly assessing the impact of implemented technologies and executing essential adjustments guarantees that the modernization process remains congruent with business objectives.

It's time to transform

In the continuously evolving panorama of manufacturing, modernization is no longer a luxury but an imperative. The confluence of data analytics, predictive maintenance, software rejuvenation, artificial intelligence, and process automation bestows upon manufacturers a transformative prospect to enhance efficiency, quality, and competitiveness. Embracing these technological innovations necessitates a strategic approach, commencing with data collection and analysis, operationalizing predictive maintenance strategies, upgrading software infrastructure, assimilating artificial intelligence, and adopting process automation.

The journey towards modernization might entail challenges, yet the rewards encompassing augmented productivity, diminished costs, and sustained expansion render it a journey worth undertaking. As manufacturers embrace the potency of innovation, they not only secure their prosperity in the present but also forge the contours of the future of manufacturing. 🌸



INDUSTRY TRENDS AND CHALLENGES

From Industry 4.0 to workforce woes, digital twin technology to new sustainability standards, robotics to security risks – the world is changing. Are Canada's small- and medium-sized businesses up to the challenge?

In the realm of industrial automation, Canada stands at the threshold of transformative change. As the world accelerates towards a new era driven by technology and innovation, the Canadian industrial automation sector is both a witness and an active participant in this evolution. From embracing cutting-edge technologies to addressing formidable challenges, the landscape is undergoing rapid shifts that are shaping the industry's present and future.

This article will delve into the trends and challenges that the Canadian industrial automation sector is currently facing, highlighting how these factors are reshaping the industry and offering insights into strategies for success.

Current trends in Canadian industrial automation

The Canadian industrial automation sector is undergoing a dynamic transformation, characterized by several prevailing trends.

To start, the integration of Industry 4.0 technologies has ushered in an era

of interconnectedness and data-driven decision-making. Across various Canadian industries, there is an active adoption of technologies such as the Internet of Things (IoT), artificial intelligence (AI), big data analytics, and cloud computing. These technologies are harnessed to optimize operations, enhance efficiency, and secure competitive advantages.

Collaborative robotics, known as cobots, represent another significant trend reshaping manufacturing floors throughout Canada. Cobots are forging a revolutionary partnership between human operators and machines, effectively enhancing productivity, precision, and workplace safety. This collaborative synergy is engendering transformative shifts in traditional manufacturing processes and substantially amplifying overall production output.

Moreover, the emergence of smart manufacturing, fueled by real-time data analytics, is solidifying its position as a fundamental cornerstone of the industrial landscape. A particularly notable facet is the ascent of predictive analytics, which has gained prominence due to its ability to foresee equipment failures. Manufacturers

are harnessing data insights to optimize maintenance schedules, thereby reducing costly downtimes and operational expenses.

Digital twin technology is a trend gaining significant traction in Canada's industrial automation. This technology involves the creation of virtual replicas of physical assets, which are then monitored in real-time. As an integral tool, digital twins are instrumental in optimizing various processes, testing designs, and simulating potential scenarios. Across diverse Canadian industries, the integration of digital twin technology is enhancing product development, streamlining operations, and minimizing time-to-market.

Last but not least, the resonance with sustainability goals is a trend that has been steadily growing within Canadian industrial automation. This trend underscores a deepening environmental consciousness, prompting the alignment of automation technologies with sustainable practices. Automation solutions are being employed to optimize energy consumption, curtail waste generation, and reduce the carbon footprint associated with industrial processes. This alignment with sustainable

WHILE THE LONG-TERM BENEFITS OF AUTOMATION ARE UNDENIABLE, THE INITIAL INVESTMENT CAN BE SUBSTANTIAL.

practices not only promotes ecological well-being but also elevates brand reputation and operational efficiency.

Challenges confronting Canadian industrial automation

In the realm of Canadian industrial automation, a series of challenges and strategies are shaping the course of the industry's progression.

First, the challenge of workforce transformation takes center stage. The integration of advanced automation technologies demands a workforce proficient in programming, data analysis, and system maintenance. The task at hand lies in upskilling the existing workforce and enticing new talent to fulfill the ever-evolving demands of the sector.

Next, the interconnected nature of industrial automation has given rise to significant cybersecurity concerns. The surge in interconnectivity amplifies the vulnerability to cyber threats. Safeguarding sensitive data and preserving system integrity emerge as pressing challenges that necessitate the implementation of robust cybersecurity measures and an unwavering commitment to vigilant monitoring.

Furthermore, the integration of legacy systems poses a formidable challenge. Across various Canadian industries, legacy systems are often not seamlessly compatible with modern automation technologies. The process of integrating new solutions while ensuring harmonious interoperability with existing systems presents a complex and resource-intensive undertaking.

Financial considerations take precedence as the challenge of high initial costs looms large. While the long-term benefits of automation are undeniable, the initial investment can be substantial, particularly for small- and medium-sized enterprises (SMEs). Balancing the potential return on investment (ROI) with the upfront costs poses a significant dilemma for companies contemplating the automation of their processes.

Navigating regulatory compliance forms another significant challenge. Automation must adhere to industry-specific regulations and standards, and this becomes particularly intricate in sectors governed by stringent safety and quality regulations. Successfully navigating these compliance requirements demands meticulous planning and execution.

Amid these challenges, there are strategies that stand as guiding beacons for success in the Canadian industrial automation landscape.

In particular, the strategy of investing in workforce development is paramount. Addressing the workforce challenge necessitates considerable investment in training and upskilling initiatives. Collaborations with educational institutions and technical training providers play a pivotal role in bridging the prevailing skills gap and cultivating a pool of skilled professionals who are well-equipped to tackle the dynamic demands of automation.

Second, cybersecurity takes precedence as a strategy for success. The protection of industrial automation systems mandates the implementation of robust cybersecurity practices. This involves the establishment of stringent security protocols, regular audits, and comprehensive employee training initiatives to effectively mitigate risks and safeguard sensitive data.

The gradual adoption of automation emerges as a prudent strategy. Companies can initiate their automation journey by automating specific processes or tasks, thereby mitigating the initial costs and minimizing the associated risks of large-scale implementation. This incremental approach allows for careful testing and refinement of automation strategies before embarking on broader implementation.

Collaborative partnerships form an instrumental strategy for overcoming challenges. Engaging with automation

solution providers, system integrators, and industry associations yields invaluable insights and guidance. These partnerships facilitate the navigation of challenges, the implementation of best practices, and the timely adaptation to emerging trends.

Lastly, embracing sustainability resonates as a strategy with multifaceted benefits. Aligning automation strategies with sustainability goals not only contributes to environmental conservation but also elevates brand reputation and augments operational efficiency. By prioritizing sustainability, organizations position themselves as responsible corporate citizens while reaping the rewards of enhanced efficiency.

In the intricate tapestry of Canadian industrial automation, these trends, challenges, and strategies are weaving a narrative of evolution and adaptation. By diligently addressing challenges and leveraging strategic approaches, the Canadian industrial automation sector stands poised to redefine the contours of success in an era driven by innovation and technological advancement.

Canadian companies on the way to becoming leaders in automation

The Canadian industrial automation sector is at a pivotal juncture, where trends and challenges intersect to shape the industry's trajectory. The integration of Industry 4.0 technologies, collaborative robotics, predictive analytics, and sustainability initiatives is reshaping how Canadian industries operate and compete on a global scale. However, challenges such as workforce transformation, cybersecurity concerns, and regulatory compliance demand careful consideration and strategic planning.

As Canada's industrial automation sector continues to evolve, proactive strategies that prioritize workforce development, cybersecurity, gradual adoption, collaborative partnerships, and sustainability will be key to thriving in this dynamic landscape. By embracing these strategies and staying attuned to the trends and challenges, Canadian industries can position themselves as leaders in innovation, efficiency, and competitiveness on the world stage. 🍁

DATAREALM

By Paul Adair, Staff Writer

David Fortin was working at Ford Motor Company as a controls engineer a few years prior to founding DataRealm in 2001. At that time, Ford became DataRealm's first client; it was Fortin's job to collect data from Ford's machinery and devices and then report it back to plant management.

Since then, DataRealm has pioneered the development and implementation of data acquisition and plant floor control systems – connecting the plant floor to the 'top floor.'

DataRealm today has the services to meet the needs of its customers, from small manufacturers to high-volume facilities, and the experience to tackle any manufacturing problem. The company provides services like controls engineering (PCL / HMI programming, electrical design, SCADA (supervisory control and data acquisition) applications, motion control, and installation, commissioning, and support);



DataRealm

automation information systems (machine performance and reporting, traceability, tool life monitoring, and energy / building monitoring); software development; artificial intelligence; and technical assessment.

"Today's data needs are not a whole lot different than they were when I first started out, but there are definitely more tools and applications available today to retrieve data," says Fortin. "It used to be that we had to write our own software, write our own applications, write our own open platform communications (OPC) servers to pull data out of machines, but now most come with all that built in, which has certainly made our jobs a little easier."

Over the last few years, DataRealm has also been exploring opportunities in augmented / mixed reality applications. The company can develop applications for

a variety of use cases, including employee training, education, and operations metrics, and all of its applications require no programming knowledge on the part of the customer to use.

"Augmented and mixed reality have so many capabilities to make the workplace more efficient, but we know that it's not that easy to understand," says Fortin. "So, we're trying to simplify augmented reality for our customers, so they won't have to become programmers to actually use it."

To remain close to its primary clients in the automotive industry, DataRealm Inc. continues to be headquartered in Windsor, Ontario, and the company also has an office in Detroit, Michigan. DataRealm employs approximately 40 people throughout the organization and has created a culture where people want to come into work by



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- DAVE FORTIN,
DATAREALM

offering flexibility and fun without sacrificing quality and a commitment to service.

"Our customers have only positive things to say about our people and their skill set and they know that we will do anything to get the job done on time and within budget," says Fortin. "We also believe in team building and let our employees organize their own events, and we have even set up an entertainment fund with a certain amount of money every month to make those events happen."

An industry of ups and downs

One of the major milestones for the company was the 2008 conversion of Ford's engine (and fuel tank) plant in Dearborn, Michigan. DataRealm was the primary contractor for upgrading the plant control systems for the assembly line, which included changing over all the PLC (programmable logic controller) and HMI (human machine interface) communication systems for the facility.

"This was one of our first very big jobs and it was a pivotal moment for DataRealm, especially considering that 2008 was the beginning of the Great Recession and the economy was in bad shape," says Fortin. "Dearborn ended up paying major dividends for us by cementing our reputation of being able to successfully handle projects of significant size, and it really put us on the map."

Even though the company has found great success in the two decades since it was established, there have also been challenges. Over the years, Fortin has seen several cycles of ups and downs, which he recognizes is how it is when serving the automotive industry.

One of the more recent challenges has been the electrification of the automotive sector. While this change will create opportunities for some, the majority of the equipment required to make the transition happen is currently coming from Asian markets, leaving domestic machine builders and controls companies out of the picture.

"The good news is that we're getting these massive battery and vehicle plants built here in Canada, and that there will eventually be some work for us, but – right now – we're just not part of that ecosystem and most of the work is being done overseas," says Fortin. "Part of the challenge going forward will be developing expertise in areas like batteries so that we'll understand the processes and be ready to supply the demand when our time comes."

Looking to the future

To create preparedness for the future, Automate Canada will be providing some battery training later this year, educating members on what it takes to make a battery for electric vehicles. This kind of training is what the association is looking to do more of as it emerges from the pandemic with a renewed energy.

Fortin was recently appointed Chairman of Automate Canada and is currently focused on membership growth and providing additional value for members.

"We want to create more opportunities to network with peers and suppliers, because that's one of the things an association is supposed to do," says Fortin. "We were really only just getting started when COVID-19 hit, and we stalled for a couple years because a new organization can only do so much online. But now that we are returning to business as usual, we want to get back to setting up peer-to-peer meetings with company leaders and reestablishing valuable networks to create better connections. The next few years are going to be pretty exciting for Automate Canada and our members." 🍁

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MIRKA



The Finnish company Mirka was founded in 1943 with a focus on quality and now, 80 years later, the company continues to bring its cutting-edge tools and solutions to the surface finishing and precision industries.

Over that time, the industry Mirka serves has evolved significantly with automation playing a pivotal role in driving some of these transformations. Sanding and polishing tasks that were once considered dusty, labour-intensive, and sometimes hazardous to workers are now being automated to increase productivity, ensure consistent quality, and improve safety.

To meet industry's growing demand for automation, Mirka provides a wide selection of end-of-arm robotic tools and abrasives, and automation solutions designed to revolutionize sanding and polishing processes in various manufacturing industries. The company's flagship product, called Mirka AIROS, is the first smart electric sander for industrial robots and cobots (collaborative robots). The launch of Mirka AIROS has revolutionized the sanding processes and has enhanced the efficiency of surface finishing across various industries.

In April 2022, Mirka made significant strides in advancing its automation capabilities by acquiring Flexmill, an engineering and integrator company that specializes in robotics and surface treatment automation, with a focus on demanding sanding, polishing, and deburring applications.

This strategic acquisition has empowered Mirka to offer more complete solutions and integration services for automated and robotized surface finishing. Flexmill's specialized knowledge in robotics and automation, combined with Mirka's expertise in surface finishing and global market reach, promises to open many new opportunities for Mirka.

"The recent acquisition of Flexmill further strengthens our position as a leader in automated surface finishing solutions," says George Varagic, President of Mirka Canada. "With Flexmill's expertise and our longstanding commitment to developing cutting-edge products, we can better address the demands of various industries, such as aerospace, automotive, marine, and energy by providing them with reliable and efficient robotic sanding and polishing solutions."

A dedication to innovation

Mirka stands out from the competition due to its unwavering commitment to sustainability and innovation. Mirka clients have come to recognize this and appreciate the company's ability to provide high-quality, reliable, and efficient robotic sanding and polishing solutions, as well as for offering a comprehensive range of products that cater to various manufacturing industries and automation needs.

"Our clients have come to expect excellent customer service and expert support from true surface finishing professionals throughout the installation process," says Varagic. "We strive to be that trusted partner for our customers and provide them with the solutions that are tailored to their specific requirements."

Mirka regards its employees as being the backbone of the company and invests in programs that encourage a safe and supportive work environment; one where health and safety development and ergonomic improvements are a top priority. As part of this, Mirka has continuously improved its power tools assembly workstations and implemented a zero-accident policy, enabling the company to reach world-class levels of occupational safety and well-being.

Mirka works continuously to become the most sustainable and innovative choice in the market, and environmental, social, and governance (ESG) initiatives are the key to their long-term goals. To this end, Mirka is a founding member of the Sustainable European Abrasives Manufacturer (SEAM) program, an initiative that has brought together the entire abrasives industry in Europe to lead stronger sustainable development.

"One of the primary challenges in adopting sustainable practices is doing so without compromising product quality or performance, and we had to invest in significant R&D to design tools and processes that are both environmentally friendly and efficient," says Varagic. "As part of the SEAM program, we actively contribute to the sustainable development of the entire abrasives industry in Europe."

The company continuously strives to reduce waste, conserve energy and raw materials, and decrease the use of harmful chemicals. As an example, Mirka reached an important milestone in 2016 as its factory in Jeppo became completely independent of fossil fuels.

"Our company culture fosters collaboration, innovation, and sustainability," says Varagic. "We encourage our employees to contribute to our clean commitments and work towards responsible solutions. We believe in empowering our workforce to drive positive change in the company and in society."

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Benefits of membership

Mirka greatly values its membership with Automate Canada and sees it as an important platform for collaboration and support for its members.

"The work of Automate Canada behind the scenes directly benefits companies like Mirka in advancing automation solutions," says Varagic. "Automate Canada has allowed us to stay connected with industry peers and access a wealth of knowledge and resources. Being part of this network has facilitated the exchange of ideas and best practices, enabling us to stay at the forefront of automation technologies and industry trends."

Looking ahead, Mirka will continue to focus on research and development to bring even more innovative solutions to the market, and the company aims to expand its range of automated tools and abrasives to meet the needs of an increasingly diverse customer base. The acquisition of Flexmill has opened new horizons, allowing the company to revolutionize the way surface finishing processes are conducted in various sectors.

Mirka will also persist in its commitment to sustainability and ESG initiatives, ensuring that the company remains a leader in providing responsible surface finishing solutions.

"We are excited about what lays ahead for Mirka, and our industry as a whole," says Varagic. "The future looks promising, and we are dedicated to driving positive change in the industry and contributing to a greener and more efficient manufacturing landscape." 🍁

"OUR CLIENTS HAVE COME TO EXPECT EXCELLENT CUSTOMER SERVICE AND EXPERT SUPPORT FROM TRUE SURFACE FINISHING PROFESSIONALS THROUGHOUT THE INSTALLATION PROCESS. WE STRIVE TO BE THAT TRUSTED PARTNER FOR OUR CUSTOMERS AND PROVIDE THEM WITH THE SOLUTIONS THAT ARE TAILORED TO THEIR SPECIFIC REQUIREMENTS."

- GEORGE VARAGIC,
MIRKA CANADA

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THE MORRELL GROUP

By Paul Adair, Staff Writer



Morrell Group's electrical showcase featuring sensor, drive, and control solutions.



A Motioneer creates a concept engineering design at a Morrell Group work station.

Morrell Group, headquartered in Auburn Hills, Michigan, and Farmers Branch, Texas, and strengthened by an office and warehouse in Windsor, Ontario, has a significant presence with 21 locations in 27 states across the USA. Their core goal: to keep you moving.

For over 45 years, Morrell has been a leading engineering partner; systems integrator; and value-added distributor of advanced motion control solutions for industrial and mobile applications. Morrell Group provides complete system solutions for automation, controls, pneumatic, electrical, hydraulic, and lubrication applications. Among these solutions is the Motioneer team, which leverages Morrell's extensive product and industry knowledge to provide innovative solutions through concept engineering.

"We're not merely a distributor of automation components; we're a provider of advanced automation solutions," expresses Jeannine Rinke, Director of Marketing at Morrell Group. "We work in tandem with our customers, delving deep to understand their specific applications to provide best-in-class solutions."

A focus on the customer

Over time, Morrell has built a robust reputation for customer service, setting high expectations among its clientele.

Morrell works collaboratively with its customers to consider all the specifications of their unique projects and provides various options to ensure the best solutions. With its manufacturing expertise and in-depth knowledge of full-system integration, Morrell addresses all industrial and mobile system needs, spanning applications and component requirements.

"When you consistently excel in your work, customers naturally raise their expectations," notes Kevin Curtis, Branch Manager at Morrell's Windsor facility. "From engineering to support, Morrell stands ready. We deeply grasp our clients' objectives, the intricacies of their machinery, and their overarching goals. This profound understanding distinguishes us from our competitors."

Empowering employees

Morrell Group attributes its success to its knowledgeable and dedicated employees who closely collaborate to create and support systems and solutions for the Factory of the Future. The company is committed to advancing the skills and capabilities of its employees with comprehensive training throughout their careers. Employees are empowered to take ownership of the work culture through open, respectful, and honest communication, and Morrell strives to provide a positive work-life balance.

Despite a positive work culture and the employees' success at the company, Morrell's Windsor facility faces the challenge of recruiting skilled Canadian workers. As large projects such as Stellantis's NextStar electric vehicle (EV) battery plant come to the Windsor-Essex area, many Canadian companies compete for talent, creating recruitment challenges for Morrell.

"The business growth in Windsor is creating a more competitive talent pool for us," explains Curtis. "Our employees see a lot of career growth and success with us, and we care greatly for each team member across our regions. We're willing to compete for Canadian talent because we know they'll succeed with Morrell."

Aligned goals

In June 2023, Morrell Group teamed up with Womack Machine Supply, a subsidiary of Womack Group. Combining their industry focus and technical expertise has allowed the two companies to apply their solutions, services, and products in more industries over a broader footprint than ever before. By working together to combine their best qualities, the companies face new opportunities that will continue to accelerate their growth.

MORRELL STANDS READY, DEEPLY GRASPING CLIENTS' OBJECTIVES, GOALS, AND MACHINERY INTRICACIES.

"After over 40 years working with our sister company Womack, coming together is a natural fit," says Mark Garrett, President of Morrell Group. "With our culture and values so closely aligned and a combined team of over 400 people, we can leave a lasting community impact across the U.S."

This combination of companies creates one of the largest automation and fluid power distributors with extraordinary capabilities in providing end-to-end solutions for customers across various industries. The joint product lines offer comprehensive solutions for aerospace, fast-moving consumer goods (FMCG), agriculture, mining, construction, automotive, energy, and more.

Part of the community

Morrell Group's culture is rooted in its communities, and the company and its employees give back at every opportunity. The company supports several initiatives and charities in the Windsor area, including the Juvenile Diabetes Research Foundation, the Hospice of Windsor and Essex County, and the Windsor-Essex Children's Aid Society.

Morrell is a proud member of Automate Canada, a significant resource for networking and exposure to new industries and customers.

"There are many possibilities for us in the Windsor area, and Automate Canada helps us to realize those," says Curtis. "The organization supports many companies, which provides us an excellent opportunity to look outside ourselves and explore new industries and potential clients." 🍁

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