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The official magazine of Automate Canada.

Issue 7, Fall 2025

Global Pressures in Automation: How Automate Canada and its Members are Navigating Change

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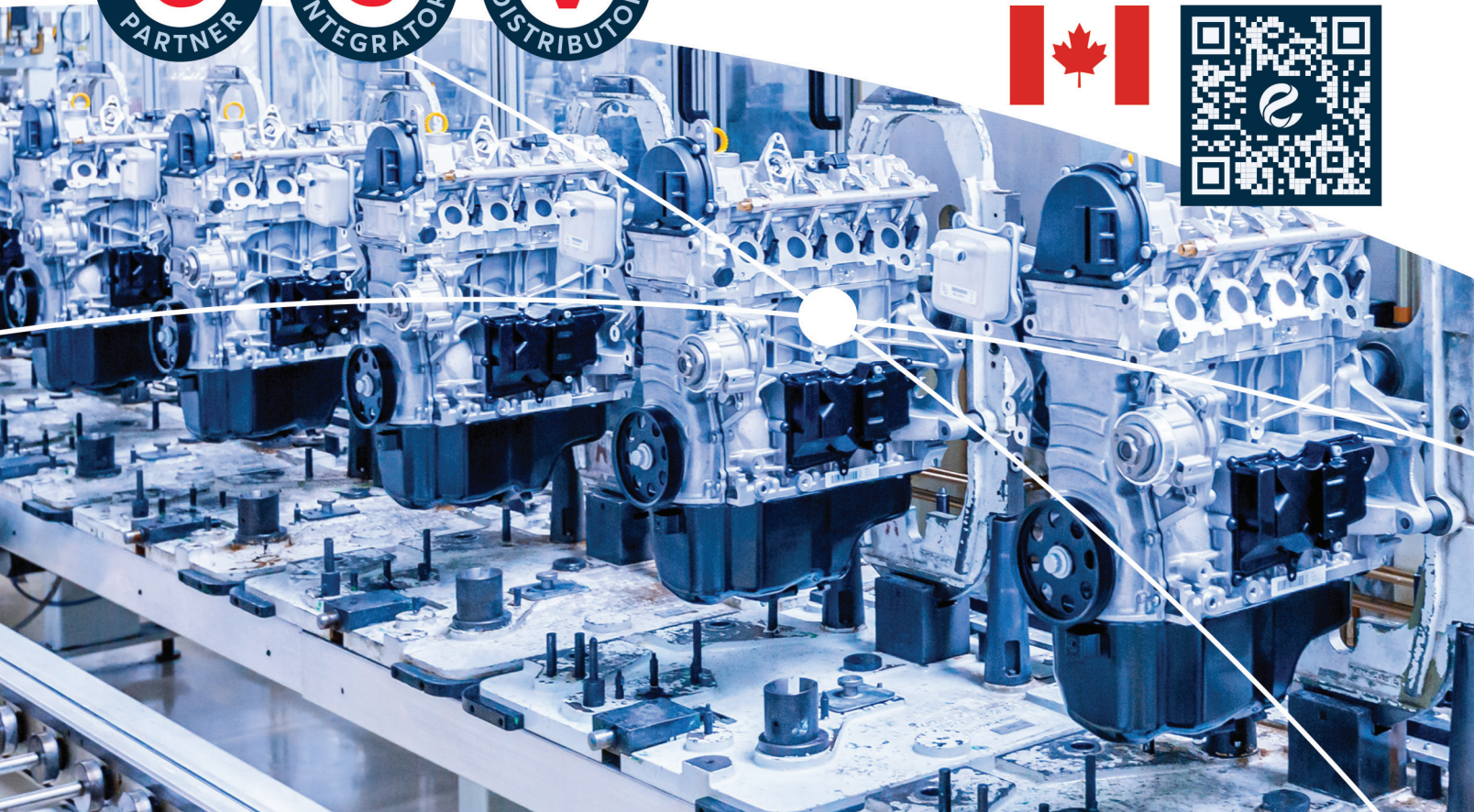
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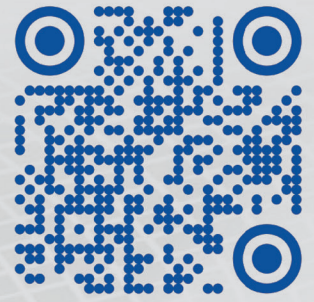


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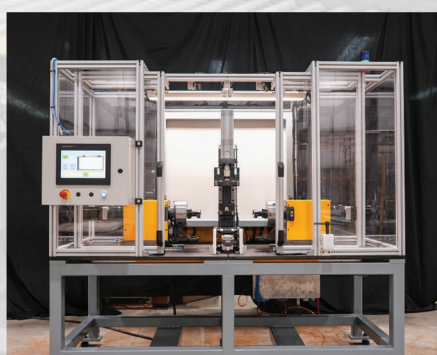
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CONTENTS

UP FRONT

- 7 Greetings from the Chair of Automate Canada
- 8 All About Automate Canada
- 9 Board of Directors
- 9 Why Should You Join Automate Canada



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MEMBER SHOWCASE

- 17 Navigating Uncertainty: How CenterLine Is Steering Through a Shifting Manufacturing Landscape

FEATURES

- 11 Cybersecurity in 2025: Why Every Business Needs a Strategy
- 13 AI, Automation, and Manufacturing: Navigating Risks, Trends, and the Road Ahead
- 15 5 Common Mistakes to Avoid When Implementing Automation Projects
- 18 Index to Advertisers

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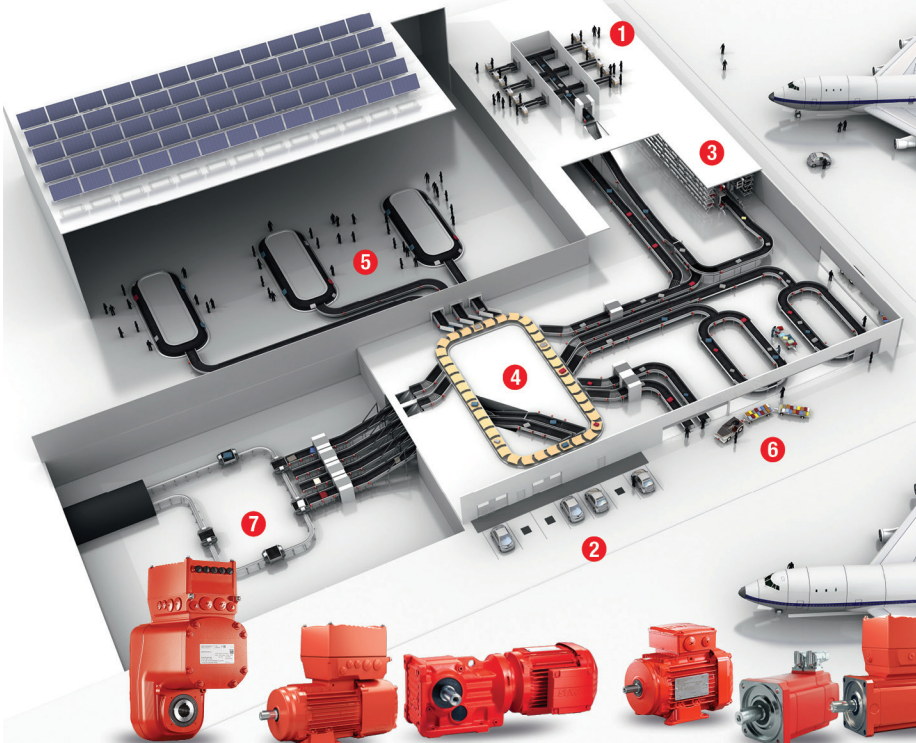
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Dave Fortin
Chair, Board of Directors
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Artificial Intelligence Applications: Positive, Negative, or a Bit of Both?

prediction is that we are on the cusp of massive change in only a few short years.

If this is what happens, what can we do to prepare? Do we continue with AI adoption and thus feed the disruption, so we don't fall behind?

How can we effectively apply AI to our industry is a question most of us are asking ourselves.

These days, I've been thinking a lot about artificial intelligence (AI). If AI technology continues to accelerate in capability what will this mean? How

many jobs will be lost, how many created?

Where is it headed? Will this acceleration create a positive cycle that further increases AI capabilities? Will we continue to see AI's intelligence surpassing that of humans and becoming capable of improving itself faster than humans can?

This acceleration will also increase the capabilities of humanoid robotics, which will extend AI into physical space! This will result in widespread disruptions. Will millions of jobs be at risk? What will happen to society? Will there be aggression toward humanoid robotics? Will they be safe? Will we be safe? In the future, will we be able to control these AIs?

The developments of these technologies are both exciting and frightening. (Consider the movies *I-Robot*, and *The Terminator*.) The

What are the implications for cutting machines, welding systems, assembly systems, packaging and material handling systems, other automation, machine design, robotics, PLC's, vision systems, and manufacturing software applications? These are very important things for us to think about.

How can we effectively apply AI to our industry is a question most of us are asking ourselves.

I recently purchased ChatGPT Pro (the monthly subscription \$200 USD) to determine its capabilities. I asked how AI can be applied in specific areas of machine building, vision systems, and controls, engineering business, etc.

Here is just one of the nine answers I received (due to lack of space). Answer three related to assembly automation systems:

3. Assembly automation systems:

- **Complex insertions.** Multi-agent DRL learns the hole-seeking, alignment, and insertion phases for shaft-hole assembly and converges faster than singleagent control PLOS.
- **Force-vision fusion.** LSTMs merge six-axis force-torque data with camera

input to detect jamming before damage occurs.

- **No-code re-teaching.** Large Language Model (LLM) interfaces let technicians describe an assembly variation in plain language; the system re-plans the path.
- **Pilot:** Simulate the task in Gazebo/ Isaac Sim first, then transfer the trained policy to the physical robot with a safety envelope.

I then asked the following follow-up question:

"Regarding assembly automation systems, please provide a much more detailed 'blueprint' with example hardware to do this example that you provided: 'Force-vision fusion. LSTMs merge six-axis force-torque data with camera input to detect jamming before damage occurs.'"

Answer:

"Below is a practical, step-by-step 'blueprint' you can lift straight into an internal specification or RFQ for a robotic assembly cell that must detect – and recover from – pin/shaft jams in real time by fusing six-axis force-torque (F/T) data with camera frames and running an LSTM based classifier on the edge.+++..."

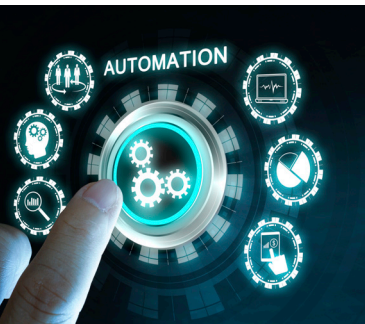
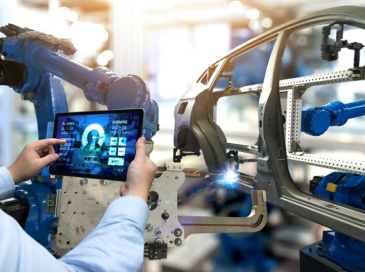
It then followed up with a very detailed stack of information on achieving this detection. Again, far too much to publish. But it included lists of hardware, interfaces, software snippets, how to mechanically integrate the sensors, timelines, ROI, approx. costs, and more.

Other common LLM's out there are Microsoft's Co-pilot (which is Chat GPT), Google's Gemini, Anthropic's Claude, and others like Cohere which is making LLM's for private enterprise use. I think the detailed answer seemed very credible. Feel free to contact me if you want any of the earlier information in more detail, or Chat's full nine answers.

Automate Canada always strives to achieve its mantra: **Share, Learn, Grow.** I'd be happy to do so with you! 🍁



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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CYBERSECURITY IN 2025:

Why Every Business Needs a Strategy

By Rich Cowan, Staff Writer

In 2025, cybersecurity is no longer optional – it is a business survival requirement. Frank Abbruzzese, President of AlphaKOR points out that “this is for all companies, regardless of their size. We’re looking at small, medium, and large enterprises, and even home offices. Everyone needs to have a cybersecurity strategy in place. It’s 100% a must today.”

Cyber threats don’t discriminate. Hackers often don’t know (or care) how big your company is before they strike. To them, any open door is an opportunity. Abbruzzese goes on, noting, “Businesses often portray themselves as larger than they are, making themselves even more tempting to criminals.”

Why everyone’s a target

Abbruzzese likens random cyberattacks to “dropping 50 people into a neighbourhood at 3 a.m. and seeing which doors are unlocked. It’s not about who you are; it’s about whether they can get in.”

While some cyber incidents are targeted – like attacks on government agencies or major banks – most are opportunistic. Common motivations include:

- **Money:** Ransomware demands, fraudulent bank transfers, or stolen corporate credit card data, which can be sold or used for fraudulent activities.
- **Bragging rights:** Bringing down a business or large organizations like banks or even information technology (IT) companies for notoriety.
- **Data theft:** Selling sensitive information on the dark web.

The ransomware reality

Abbruzzese describes how it often works, explaining, “Ransomware attacks frequently hit late on Sunday nights or early on Monday mornings. Victims arrive at work to find their systems locked and a demand to pay in Bitcoin.” Shockingly, there’s often a “helpline” – run by negotiators hired by the hackers themselves – to walk victims through the payment process.

Some ransom demands are small enough to seem “reasonable.” Abbruzzese shares, “In one case, hackers demanded \$130,000 from a company generating over \$10 million annually. The owners were actually insulted

at the low figure of the demand but still had to negotiate.” Paying, however, is a gamble: some hackers honour their word and unlock systems; others mark you as an easy future target.

How attacks have evolved

Artificial intelligence (AI) has made scams harder to detect. As Abbruzzese notes, “Gone are the days of poorly written phishing emails with obvious spelling mistakes. Modern attacks feature perfect grammar, realistic branding, and even AI-generated voice clones can sound like your CEO, a government agent, or any official.”

Attackers use social engineering to study businesses and exploit trust. A common tactic is to hijack an employee’s email account, change payment instructions to a fraudulent bank account, and set email rules to hide all traces of the correspondence. The result? Payments vanish, and victims often don’t realize until weeks later. At this point, the questions arise, “Is the attack internal? Is it external? How will your bank deal with it? How will your insurance cover it? How’s



the operation? We had one company lose a quarter of a million dollars on this simple example,” says Abbruzzese.

The cloud isn't a fortress

Many businesses assume their data is safe simply because it's stored in the cloud. But “the cloud” is just someone else's computer – and its security depends entirely on the provider. Key questions to ask include:

- What's in the service level agreement?
- Where is your data physically stored?
- What backup and recovery protocols are in place?
- Is your data replicated across multiple locations or continents, and does this align with your compliance requirements?

For certain industries, especially finance, storing data outside the country can create serious legal and trust issues.

Insurance is not a substitute for security

Cyber insurance can be a safety net, but obtaining or renewing it often involves a detailed questionnaire about your security posture. Insurers want to know about your backups, multi-factor authentication (MFA), and access controls. AlphaKOR helps clients navigate and complete these surveys and implement recommendations – because incomplete answers or ignored risks can lead to denied claims.

The cost of not preparing can be devastating. Abbruzzese says, “Some companies take years to recover from a ransomware attack. Beyond operational downtime, there's the reputational damage of informing customers and suppliers that their data may have been breached.”

Cost-effective protection strategies

Security should be proportional to your business size, but there are universal low-cost essentials:

- **Multi-factor authentication (MFA):** Prevents many account takeovers.
- **Regular backups:** Kept in secure, disguised locations, tested frequently.
- **Managed cybersecurity services:** 24/7 monitoring by professionals.
- **Employee training:** Phishing simulations, lunch-and-learn sessions, and regular updates on current scams.
- **Dark web monitoring:** Alerts you if employee credentials appear in underground marketplaces.

Abbruzzese notes employee awareness is the most cost-effective measure. Even tech-savvy staff fall for convincing scams, which is why ongoing testing is critical.

The human factor

Cybersecurity is as much about people as technology. Scams often exploit helpfulness or fear, for example, urgent requests from a “boss” to buy gift cards, pay fake speeding tickets, or click on “delayed package” notifications.

“Keeping employees informed through internal emails, sharing examples of current scams, and encouraging staff to report suspicious messages helps maintain vigilance. Testing tools send simulated phishing emails to reinforce good habits without shaming employees,” Abbruzzese suggests.

Incident response and recovery

If you're hit, quick action matters:

- **Identify the scope:** What systems or data were accessed?
- **Check backups:** Are they intact and unencrypted?

- **Consider forensics:** Determine how the attackers got in.
- **Engage experts:** Work with IT, insurance, legal, and the accounting teams.

Unfortunately, ransomware can lurk in a system for months before activating. Relying on a months-old offline backup may still fail; the malware may have already infected it. Modern backup strategies disguise and isolate backups so attackers can't find them.

Balancing convenience and security

One reason businesses skip safeguards is inconvenience. MFA prompts, password changes, or blocked files can slow things down. But the alternative – a breach – can halt operations entirely.

Abbruzzese explains, “Security should be tailored: a \$100 firewall isn't sufficient for a \$200-million company, just as a \$10,000 system may be overkill for a small home-based business. The goal is to find the right balance where you can confidently tell stakeholders you invested appropriately and acted responsibly.”

The bigger picture

Threats don't just come from random criminals. Nation-state actors from some foreign countries are known to target infrastructure, finance, and large service providers. Attacks may be disguised through multiple “hops” to hide their origin, making attribution difficult. Abbruzzese notes the attacks AlphaKOR has investigated, “we haven't seen one that originated in North America.” The attacks come from all over the world.

The dark web serves as a global black market for stolen data, tools, and hacking services, easily accessible to those who know where to look. Monitoring it for your company's credentials can provide an early warning of potential compromise.

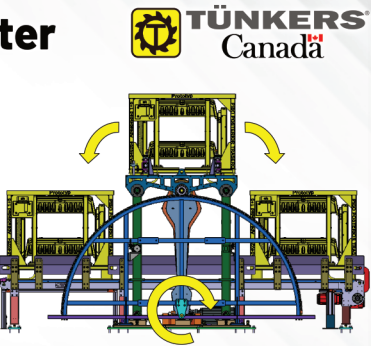
In today's digital landscape Abbruzzese notes, “Cybersecurity isn't just an IT issue: it's a core business responsibility. The question isn't if you'll be targeted, but when.”

- The smartest companies:
- Invest in layered defenses.
 - Train their people continuously.
 - Prepare incident response plans.
 - Build trusted partnerships with IT experts.

Because when the inevitable happens, it's not just about surviving the attack – it's about maintaining trust, meeting obligations, and emerging stronger. 🌸

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AI, AUTOMATION, AND MANUFACTURING:

Navigating Risks, Trends, and the Road Ahead

By Rich Cowan, Staff Writer



Artificial intelligence (AI) has moved from concept to a reality in manufacturing – reshaping operations, supply chains, and customer expectations at an unprecedented pace. Yet, with every

technological leap comes a unique set of risks, challenges, and opportunities. There is a need to implement AI responsibly, ethically, and sustainably.

Safia Raheemulla, a Partner in EY's Risk Consulting practice, shared her insights on the current AI landscape, its risks, and what manufacturing leaders should be thinking about as they prepare for a future where AI and automation are inseparable.

Understanding AI risk in manufacturing

Like any new technology, AI brings with it inherent risks. Raheemulla categorizes these into two main areas:

- **Traditional responsible AI risks:**

These include “bias within AI systems, lack of transparency, and inconsistent performance against stakeholder expectations, and related compliance or reputational concerns.” Even well-designed models can fail to deliver value if they don't align with real-world needs. For example, false positives in a predictive maintenance model causing unnecessary down time and costs or false negatives in turbine or press monitoring leading to catastrophic failure.

- **Risks to resiliency:** AI models can be vulnerable to manipulation, unauthorized access, and data tampering. For example, cybersecurity risks can be realized if AI is not secured, such as hackers altering production instructions, sabotaging outputs, or leaking intellectual property. As more operational processes become AI-driven, the stakes get higher. AI can

play a significant role in DevSecOps (Development, Security, Operations) by enhancing security, efficiency, and collaboration throughout the software development lifecycle. EY's Responsible AI framework addresses these challenges with a simple premise: risks are inevitable – the key is managing and mitigating them through structured processes. That includes model risk tiering, ongoing monitoring, security and privacy assessments, and robust change management for employees.

“Just like with any technology,” Raheemulla explains, “there is risk. The goal isn't to eliminate risk – it's to manage it and mitigate it.”

Shockwaves reshaping manufacturing

While AI is a major influence, it's not the only factor shaking up the industry. Raheemulla points to three powerful forces manufacturers are dealing with:

1. Supply chain resiliency:

Global trade complexities, tariffs, and geopolitical uncertainty are forcing manufacturers to rethink supply chains. Predictive analytics and AI-driven forecasting are becoming essential to anticipate and mitigate disruptions.

2. Changing customer

expectations: Today's customers demand seamless, personalized, easy to use experiences. Data-driven customization is no longer a luxury, it's an expectation.

3. Sustainability pressures:

Manufacturers must show ever-increasing accountability for their environmental footprint and meet Environmental, Social and Governance (ESG) reporting requirements, which are rising globally.

Leading practices for introducing AI

According to Rahemtulla, "Too many companies fall into the trap of implementing AI simply for the sake of AI." Instead, she recommends starting with four critical questions:

- 1. Why are we using AI?** Identify the specific business problem AI will solve.
- 2. How does it align with strategic goals?** Ensure AI adoption supports broader organizational objectives.
- 3. What is the Return on Investment (ROI)?** Consider both financial and non-financial returns, such as improved employee or customer experiences.
- 4. What governance and compliance measures are in place?** Organizations should implement ethical, fair, and accountable AI systems, that are in compliance with regulation and the organization's risk appetite and tolerance. Doing so allows organizations to mitigate risks, build trust, and implement AI technologies that are used for the benefit of society as a whole.

The implementation strategy should also reflect the risk tier of the AI application, for example, customer-facing decision systems require far stronger controls than internal knowledge management tools.

Regulatory grey area in Canada

In Canada, AI is not yet federally regulated. However, we are starting to see compliance frameworks and/or legislation

at the provincial level. Further global manufacturers need to not just think about Canada but also think about the other countries they are operating in, which do have regulation – for example the *EU AI Act*. The varied regulatory landscape creates something of a split in Canadian corporate attitudes:

- **The cautious camp:** Waiting for regulation before making big moves to avoid potential compliance issues.
- **The opportunists:** Taking advantage of the current "open season" to experiment and innovate before restrictions are implemented.

With that said, there have been recent steps toward oversight. In September 2023, the federal government introduced a Voluntary Code of Conduct for Generative AI, setting out interim expectations around accountability, safety, fairness, transparency, and human oversight. At the provincial level, Ontario has passed Bill 194, creating a Responsible Use of AI Directive for the public sector, while Quebec's updated privacy law (Bill 25) now includes requirements for automated decision-making.

"AI takes existing automation and puts it on steroids."

AI as the next stage of automation

Rather than replacing automation, AI is accelerating it. Lower costs for storage and computing power have made advanced AI applications more accessible. "It's a maturation," Rahemtulla says. "AI takes existing automation and puts it on steroids."

Most Canadian manufacturers are enhancing, not replacing their existing systems. Over time, as older technologies become obsolete, AI solutions will naturally take on a more dominant role.

In order to unlock the potential of AI, organizations need:

- **Regulation:** Move effectively and efficiently within existing regulations – globally and in Canada.
- **Technology stack optimization:** Optimize their technology stack, minimizing technology debt to enable a playing field for AI.
- **Data readiness:** Seek to understand data readiness, underpinned by strong

data governance, as an AI system is only as robust as the data it consumes.

- **Workforce readiness:** "Many manufacturing workers, and even executives, were not 'born into technology,' creating resistance to change and the need for upskilling," says Rahemtulla.

Rahemtulla emphasizes that AI adoption is as much about "human change management as it is about technological integration." Active upskilling through structured programs, like EY's AI Academy, can increase adoption and confidence.

What's coming next?

Rahemtulla identifies several emerging areas that manufacturers should keep on their radar:

- **Automotive telematics:** Vehicles are becoming rolling data hubs, offering valuable insights into driver behaviour and customer preferences.
- **Supply chain visibility:** Forecasting and realtime tracking will be critical in navigating increasingly complex trade environments.
- **Customer experience optimization:** Leveraging customer data to drive product innovation, personalize offerings, and improve recommendations.
- **Manufacturing innovations:** Continued automation of manufacturing processes for efficiency, quality, and scalability.

The future of manufacturing will not be defined by AI alone, but by how effectively companies can integrate it with existing systems, navigate its risks, and prepare their workforce for the inevitable changes to come.

Rahemtulla adds, "AI is not a silver bullet. It's a power tool – that, when used strategically, can transform operations, elevate customer experiences, and strengthen supply chains resiliency." However, she warns, "Without a clear vision, risk management, and a people-focused approach, it can just as easily become an expensive distraction."

As the Canadian manufacturing sector stands at this technological crossroads, the companies that will thrive are those willing to experiment thoughtfully, adapt quickly, and keep their eyes firmly on both innovation and implementation discipline. 🌸

5 COMMON MISTAKES TO AVOID WHEN IMPLEMENTING AUTOMATION PROJECTS

Learn how to avoid these common mistakes so you can make your projects cost effective faster.

Editor's note: This article originally appeared on BDC's website. For more great insights on leadership, technology, business strategies, and more, visit www.bdc.ca.

If you're about to deploy an industrial robot on your manufacturing floor for the first time, you're probably keen to avoid the most common – and costly – mistakes. And rightly so, since this first experience could be decisive for what happens next.

It's important for your first project to be successful, because failure can make a big dent in your teams' morale. It will make it difficult to get subsequent projects off the ground, as your staff will be hard to motivate.

Here are the five most common mistakes to avoid when implementing automation and robotics projects.

1. Choosing the first supplier you meet

Robotics is a highly specialized sector, but a number of suppliers can meet your needs. So take the time to weigh your options. Compare four or five different suppliers and then solicit bids from at least two.

If you want your project to deliver the best possible results, take the time to explore the market, recommends Vincent Bombardier, Senior Business Advisor, BDC Advisory Services, who specializes in helping companies carry out automation and robotics projects.

"For example, many business owners will visit an industry show and talk to manufacturers. Some will then go ahead with a purchase if some of the bids received afterwards suit them," he says. "However, there are other considerations beyond price, such as quality, after-sales service, the integrator's proximity and compatibility with existing systems. They won't necessarily make a bad choice, but it will rarely be the best one."

2. Failing to plan

When you fail to plan, you plan to fail. This applies to robotics as much as to business projects in general. To avoid delays and cost overruns, plan your project properly.

This includes developing a clear, realistic timeline for the implementation of your new tools. It also means determining how your new robots will integrate with your existing systems.

Integrating a robot on your manufacturing floor could also transform your processes. Think about this transformation before implementing new technology. In this way, you'll avoid having to relocate or reprogram your machines shortly after they are deployed. To avoid delays and cost overruns, involve all stakeholders from the outset of the project,



and ensure everyone understands their responsibilities and timelines.

3. Failing to clearly define expectations and goals

If your expectations and goals are unclear, the results of your robotics project are likely to be disappointing. To ensure that the deployment of your first robot meets your needs, draw up a set of requirements and make sure your supplier understands your goals.

"Too many companies start a project without defining their needs in a requirements document," says Bombardier. "If companies did this rigorously, it would solve at least 80% of the most common problems in advance."

A well-written requirements document also lets you include payment terms linked to the achievement of key milestones in your project. These milestones may include, for example, performance testing, meeting technical requirements or validating results through field trials. This increases your chances of achieving your goals.

Lastly, ask your supplier to provide a schedule detailing the steps required to

achieve optimal performance. This includes the phases of testing, employee training and technical adjustments, with a specific time scale for each step.

"There's always a learning curve," says Bombardier. "It's not realistic to expect a system to run at full efficiency from day one. Discuss this with your supplier or integrator."

4. Failing to get proper training

Your new system generally won't run itself, and it will also require maintenance.

All too often, companies forget to train their teams. This can lead to a number of problems, including reduced efficiency, delays in order delivery and even safety challenges.

"Often, entrepreneurs who have purchased equipment later realize that the training provided by the supplier doesn't enable the existing team to operate, maintain or adjust the machine," explains Bombardier.

So make sure your staff has the skills to operate and maintain your new equipment from the start. If they don't, provide proper training.

"You should consider this when you draw up your requirements document,"

suggests Bombardier. "It's a key step in the success of your project. Adding a training requirement will enable the various potential suppliers to take it into account in their bids, making it easier to compare and avoid unpleasant surprises."

5. Failing to comply with current standards

Sometimes companies buy equipment without taking into account current standards and regulations. This can lead not only to safety issues, but also to delays, if, for example, an inspector orders the system to be shut down due to noncompliance.

Rules vary from province to province. But in Ontario, for example, companies must undergo a review when they install a new machine, notes Bombardier.

"The purpose of the review is to ensure the safety of workers and their workplace. Businesses can't afford to ignore these rules. That would be a very costly mistake."

BDC has a video on this topic here: <https://youtu.be/QgSmhRXAQTl>



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NAVIGATING UNCERTAINTY:

HOW CENTERLINE IS STEERING THROUGH A SHIFTING MANUFACTURING LANDSCAPE

By Rich Cowan, Staff Writer



Manufacturers were hoping for stability in 2025, but they've experienced everything but. For CenterLine, a Windsor-based leader in automation equipment, the challenges are clear: trade

uncertainty, shifting automotive priorities, and competitive global pressures. Yet, according to Vice President of Sales Phil Campbell, the company's adaptability, innovation, and strong culture continue to keep it resilient.

Trade tensions and their ripple effects

Campbell, like many others, began the year expecting that U.S.-Canada trade uncertainty would settle after August 1st, paving the way for a return to normal business activity. Instead, geopolitical developments, including shifting priorities in Washington, have left tariffs and trade barriers firmly in place.

The 25% tariff on vehicles crossing the Canada-U.S. border has had a significant cooling effect on Original Equipment Manufacturer (OEM) spending. "When they're losing money, they're not feeling like spending money," Campbell explains. "Like consumers in survival mode after a job loss, automakers are delaying or cancelling major capital projects until there's clarity."

While CenterLine's consumables and spare parts divisions remain stable, bolstered by niche areas like additive manufacturing

for aerospace and defence, larger capital projects have slowed. "Cancellations in the electrification space have been particularly disruptive. Some of that equipment was completely built," Campbell notes, pointing to suppliers like one large global automotive tier one manufacturer who had to repurpose expensive capital when programs were scrapped.

Shifting automotive landscape

The Ontario auto sector has also faced abrupt changes. Planned projects, such as an intended three row electric SUV plant in Oakville was cancelled and shifted to full-size diesel trucks, while the Stellantis Jeep Compass program in Brampton has been delayed. Campbell states that, "Electric vehicle (EV) adoption remains modest in the U.S. at just 7.6% of the market, with consumers showing stronger demand for hybrids and more traditionally fueled vehicles."

Such shifts force companies like Centerline to adapt quickly. In some cases, they're asked to modify existing production lines rather than build entirely new ones – work that brings in less revenue but still provides value to customers.

Global pressures and productivity challenges

Beyond North America's trade dynamics, Campbell sees a clear rise in foreign competition entering the global automation market. "Lower-cost jurisdictions are



CenterLine employees Alison Dolata (left) and Alex Bussiere (right) help out at a FIRST® Robotics competition, a team-based robotics program for ages 4 to 18 (pre-K to grade 12). Photos courtesy of CenterLine.



CenterLine's advanced assembly equipment integrates Industry 4.0 technologies like CenterPoint connectivity and smart software – driving real-time insights, automation, and global manufacturing agility.



Phil Campbell, Vice President of Sales, CenterLine.

aggressively pursuing business, bringing a work ethic reminiscent to that of North America decades ago.

Countries that are hungry to improve their standard of living will work tirelessly to do it," Campbell says. In contrast, he warns that complacency in Canada has contributed to a drop in global productivity rankings: "from third in the 1970s to 22nd today."

For Campbell, productivity comes down to two factors: investment and culture.

Nations and companies that invest in advanced manufacturing technologies, such as artificial intelligence (AI) and robotics, while maintaining a drive to improve, will outpace those that rest on past successes.

The CenterLine culture: retention through purpose and innovation

If there's one area where CenterLine feels ahead of the curve, it's talent. While labour shortages challenge many manufacturers, the company has cultivated a strong pipeline through outreach programs, apprenticeships, and community involvement.

A major pillar of this strategy is CenterLine's partnership with FIRST® Robotics, where employees mentor students and inspire interest in science, technology, engineering, and math (STEM). This engagement, combined with a robust apprenticeship program currently supporting about 70 participants, helps to create a steady stream of skilled workers.

Retention is another strength. Many employees spend decades at CenterLine – a testament to the company's culture. "When people come, they generally stay," Campbell says, noting that average tenure once reached 15 years and remains strong despite rapid growth from 300 employees to around 800 to 1,100 at peak.

Innovation as a core value

CenterLine's resilience is rooted in its DNA. Founded nearly 70 years ago,

the company has built its reputation on designing more efficient ways to manufacture automotive parts. That spirit of innovation continues in the now third generation of leadership and in the company's 12-person product development team.

Recent initiatives include *CenterPoint*, a connectivity and software solution for Industry 4.0, demonstrating CenterLine's commitment to staying ahead of technological change. Campbell emphasizes that their approach is proactive: "We are constantly looking down the road for the next thing that'll make us more competitive and more attractive to the marketplace."

Diversification and strategic planning

Looking forward, Campbell says diversification beyond automotive automation is a key strategic priority. The company's global affiliates located in Brazil, China, India, Germany, Mexico, and Romania, give it valuable insight into different markets and cultures, helping identify opportunities outside the traditional core.

While he remains optimistic, Campbell is realistic about the uncertainties ahead. "We can't control what the U.S. administration or the market is going to do. But we can control what we do," he says.

The role of industry associations

Membership with Automate Canada, along with other organizations is part of

CenterLine's visibility strategy. For Campbell, "Aligning with industry associations provides profile, credibility, and access to networks. There's so much competition for attention today – you need to make sure you're visible in all the places your customers might be looking," he says. "Automate Canada provides just that, with their events and networking opportunities. Our affiliation makes sense."

Resilience in an age of disruption

Campbell characterizes the current moment as an "inflection point" in manufacturing history, shaped by geopolitics, shifting power structures, and rapid technological change. Success, he believes, will favour those who remain nimble, invest in innovation, and refuse to grow complacent.

"It's not for the faint of heart," he says. "But if you're resilient and adaptive, you can come out the other side stronger."

For CenterLine, that means leveraging its heritage of innovation, maintaining strong relationships with its workforce, and pursuing new markets – all while navigating the unpredictable waters of global manufacturing. 🌸

INDEX TO ADVERTISERS

| | |
|--|--------------------|
| AUTOMATION ASSEMBLY AND INTEGRATION | |
| CWL Solutions..... | 10 |
| AUTOMATION CONTROL INTEGRATORS | |
| Evolution Motion Solutions..... | 3 |
| AUTOMATION SOLUTIONS PROVIDER | |
| Tunkers Canada Inc..... | 12 |
| CUSTOM AUTOMATED WELDING AND ASSEMBLY LINES | |
| CenterLine (Windsor) Ltd. | inside back cover |
| INDUSTRIAL AUTOMATION PROGRAMS | |
| St. Clair College..... | 16 |
| INDUSTRY EVENTS | |
| MD&M Midwest | outside back cover |
| INTEGRATION AND DEVELOPMENT SPECIALISTS | |
| Black Controls Company Inc..... | 4 |
| REFURBISHED ROBOTS | |
| Robotics Research and Integration Inc. | 18 |
| SINGLE-SOURCE AUTOMATION SOLUTIONS | |
| Sew-Eurodrive Company of Canada Ltd. | 6 |
| SPECIALTY MACHINE DESIGN AND BUILD | |
| Trillium Machine..... | inside front cover |
| SYSTEM INTEGRATOR SOLUTIONS | |
| Onyx Engineering | 10 |

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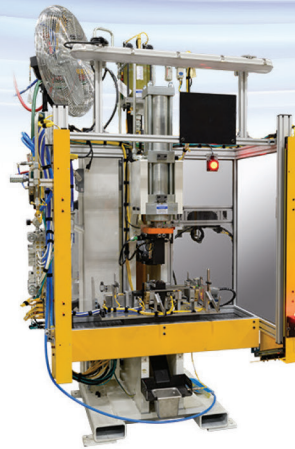
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