

# PLANT

ADVANCING  
CANADIAN  
MANUFACTURING

MARCH 2018 | WWW.PLANT.CA | \$12



## ACL'S BATTLE PLAN STAYING IN ONTARIO

... but Jocelyn Bamford speaks  
up about barriers to growth

Recycled TPP gets a red flag

The digital wave is coming

How to balance cost and availability of spares

Bill 148: Five points of impact to watch

3D manufacturing is changing the rules

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## 12 MANUFACTURING

Automatic Coating is staying in Ontario to pursue its goals but vice-president Jocelyn Bamford worries other manufacturers will head south.



**16 AUTOMOTIVE** Many in the auto industry are concerned the CPTPP trade pact will do more harm than good.



**20 TRAINING** Train supervisors to solve problems and help question-askers figure it out.



**18 INDUSTRY 4.0** A digital wave is coming and MNP says Canadian businesses are preparing for a transformation.



**21 LAW** Bill 148 and what the amendments mean to manufacturers.

## FEATURES

**23 CYBERSECURITY** Most companies have been cyber attacked and the cost of recovery is rising.

**24 WAGES** BDC is predicting higher wages this year as factors driving growth come into play.

**25 DIGITAL TECH** Factors you should consider as you prepare to implement 3D manufacturing.

**26 CCOHS SAFETY TIPS** Recognize harassment in the workplace and be prepared to act.

**27 MAINTENANCE** Manage spares by balancing cost and availability.

**TECH TIP** Check for soft foot when installing belt-driven motors.

**29 THINK LEAN** Strengthen employee engagement by establishing an emotional commitment.

**30 SUSTAINABILITY** How green business practices lead to growth and profitability.

## DEPARTMENTS

- 4 Editorial
- 6 News  
Bulletins
- 8 Careers
- 10 PLANT Online
- 11 Economy  
PLANT Pulse
- 31 Tech Centre Feature: Five steps to greener pest management.  
Supply Lines
- 32 Leading Edge: Innovative ideas for plants
- 34 Products and Equipment
- 37 Plantware  
Events
- 38 Postscript

Cover: Silvana Metallo

PLANT—established 1941, is published 8 times per year by Annex Business Media. Publications Mail Agreement #40065710. Circulation email: [blao@annexbusinessmedia.com](mailto:blao@annexbusinessmedia.com) Tel: 416-442-5600, ext 3552 Fax: 416-510-6875 or 416-442-2191 Mail: 111 Gordon Baker Road, Suite 400, Toronto, ON M2H 3R1. Occasionally, PLANT will mail information on behalf of industry-related groups whose products and services we believe may be of interest to you. If you prefer not to receive this information, please contact our circulation department in any of the four ways listed above. Annex Privacy Officer: [privacy@annexbusinessmedia.com](mailto:privacy@annexbusinessmedia.com) Tel: 800-668-2374. No part of the editorial content of this publication may be reprinted without the publisher's written permission. ©2018 Annex Publishing & Printing Inc. All rights reserved. Performance claims for products listed in this issue are made by contributing manufacturers and agencies. PLANT receives unsolicited materials including letters to the editor, press releases, promotional items and images from time to time. PLANT, its affiliates and assignees may use, reproduce, publish, re-publish, distribute, store and archive such unsolicited submissions in whole or in part in any form or medium whatsoever, without compensation of any sort. This statement does not apply to materials/pitches submitted by freelance writers, photographers or illustrators in accordance with known industry practices. Printed in Canada. ISSN: 1929-6606 (Print), 1929-6614 (Online).



# Trump's continuing reign of error

**A**merica has paid little attention to its northern neighbour, top trading partner and closest ally in the past, something that has made Canadians feel under-appreciated. We are no longer being ignored!

Who would have thought in November 2016 that with the election of Donald Trump as president of the US (indeed, many thought that was impossible), Canada would garner so much attention, much of it passively hostile (as in without the threat of arms).

Really, how much trouble did we have with Barack Obama, other than the Keystone thing and a few other trifles?

Yet the 45<sup>th</sup> president of the US, just over a year into his administration, has positioned Canada as a trading marauder, taking advantage of a naïve, defenceless America by running rough-shod over its softwood producers, treating its farmers badly and somehow finagling undue advantage from NAFTA, especially when it comes to the automotive sector.

Now Canadian manufacturers operating within North American supply chains have something else to worry about. The Trump administration has slapped a 25% tariff on imported steel and a 10% tariff on aluminum.

Trump did this by invoking a rarely used provision in American law that allows the president to take unilateral action as a counter to a national security threat. His dubious reasoning: the US relies too too-heavily on foreigners for metals used in the production of military weapons, machinery, equipment and gear.

If this is a slap at China, a favourite Trump villain in the unfair trading and dumping narrative, his aim is off since the People's Republic is responsible for about 2% of the US supply. Yet the tariffs put Canada, America's top supplier of both metals (in trade worth \$24 billion a year), in the Trump crosshairs.

It's astonishing Canada would be regarded as a "security" threat when you consider the Trudeau government can't place an order for fighter jets without turning the process into a procurement fiasco. Happily, after some furious eleventh-hour lobbying, Canada and Mexico won exemptions as trusted allies, with a catch: they agree to a NAFTA deal that's to Trump's liking. (Other allies can also apply for a pass.)

But the real estate agent/reality-show carnival barker president is taking a tremendous risk with this vanity project aimed at his base to prove he can bring jobs back to the US. He is doing so against the wishes of many in his own party, his now ex-chief economic advisor (Gary Cohen), his allies as well as many economists and analysts who, unlike Trump, actually pay attention to studies, analysis and history. They all fear the chaos and consequences of retaliation that will disrupt global trade flows, while the WTO is concerned that using security as a ploy to raise protectionist barriers encourages other countries to do the same.

Trump is also ignoring the likelihood that his actions will kill jobs rather than create them, in part by raising costs for manufacturers and prices for consumers. (A Trade Partnership study forecasts 33,500 jobs created in the two metals sectors, and 180,000 lost in other industries.)

In one of Trump's tweet eruptions, he proclaimed the "Russians were laughing their asses off" at how the US was handling the Russian investigations. Now they have something else to laugh at. Since it is Vladimir Putin's aim to disrupt and divide Western alliances, he has surely backed the right guy in Washington to get the job done.

For Canadian manufacturers looking for more stable business conditions before making significant investments, the countdown is on: two and half years before America has an opportunity to end Trump's reign of error and elect a real president.

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**PLANT** ADVANCING CANADIAN MANUFACTURING

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**Subscription Price**  
 Canada \$74.50 per year, US \$151.50 (US) per year, Foreign \$171.00 (US) per year. Single Copy Canada \$12.00. Add applicable taxes to all rates. Combined, expanded or premium issues, which count as two subscription issues.

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 Fax: 416-510-6875 or 416-442-2191



**Canada**

We acknowledge the [financial] support of the Government of Canada.

# The Truth About Compressed Air!

If you think compressed air is too expensive and noisy - read this. The facts will surprise you!

## Compare these Blowoffs

There are a variety of ways to blow the water from the bottles shown in the photo below, but which method is best? To decide, we ran a comparison test on the same application using four different blowoff methods: drilled pipe, flat air nozzles, Super Air Knife (each using compressed air as a power source), and a blower supplied air knife (using an electric motor as a power source). Each system consisted of two twelve inch long air knives. The following comparison proves that the EXAIR Super Air Knife is the best choice for your blowoff, cooling or drying application.

The goal for each of the blowoff choices was to use the least amount of air possible to get the job done (lowest energy and noise level). The compressed air pressure required was 60 PSIG which provided adequate velocity to blow the water off. The blower used had a ten horsepower motor and was a centrifugal type blower at 18,000 RPM. The table at the bottom of the page summarizes the overall performance. Since your actual part may have an odd configuration, holes or sharp edges, we took sound level measurements in free air (no impinging surface).

### Drilled Pipe



This common blowoff is very inexpensive and easy to make. For this test, we used (2) drilled pipes, each with (25) 1/16" diameter holes on 1/2" centers. As shown in the test results below, the drilled pipe performed poorly. The initial cost of the drilled pipe is overshadowed by its high energy use. The holes are easily blocked and the noise level is excessive - both of which violate OSHA requirements. Velocity across the entire length was very inconsistent with spikes of air and numerous dead spots.

### Flat Air Nozzles



As shown below, this inexpensive air nozzle was the worst performer. It is available in plastic, aluminum and stainless steel from several manufacturers. The flat air nozzle provides some entrainment, but suffers from many of the same problems as the drilled pipe. Operating cost and noise level are both high. Some manufacturers offer flat air nozzles where the holes can be blocked - an OSHA violation. Velocity was inconsistent with spikes of air.

### Blower Air Knife



The blower proved to be an expensive, noisy option. As noted below, the purchase price is high. Operating cost was considerably lower than the drilled pipe and flat air nozzle, but was comparable to EXAIR's Super Air Knife. The large blower with its two 3" (8cm) diameter hoses requires significant mounting space compared to the others. Noise level was high at 90 dBA. There was no option for cycling it on and off to conserve energy like the other blowoffs. Costly bearing and filter maintenance along with downtime were also negative factors.

### EXAIR Super Air Knife



The Super Air Knife did an exceptional job of removing the moisture on one pass due to the uniformity of the laminar airflow. The sound level was extremely low. For this application, energy use was slightly higher than the blower but can be less than the blower if cycling on and off is possible. Safe operation is not an issue since the Super Air Knife can not be dead-ended. Maintenance costs are low since there are no moving parts to wear out.

**The Super Air Knife is the low cost way to blowoff, dry, clean and cool.**

## Facts about Blowers

Energy conscious plants might think a blower to be a better choice due to its slightly lower electrical consumption compared to a compressor. In reality, a blower is an expensive capital expenditure that requires frequent downtime and costly maintenance of filters, belts and bearings.

### Here are some important facts:

- Filters must be replaced every one to three months.
- Belts must be replaced every three to six months.
- Typical bearing replacement is at least once a year at a cost near \$1000.
- Blower bearings wear out quickly due to the high speeds (17-20,000 RPM) required to generate effective airflows.
- Poorly designed seals that allow dirt and moisture infiltration and environments above 125°F decrease the one year bearing life.
- Many bearings can not be replaced in the field, resulting in downtime to send the assembly back to the manufacturer.

Blowers take up a lot of space and often produce sound levels that exceed OSHA noise level exposure requirements. Air volume and velocity are often difficult to control since mechanical adjustments are required.

To discuss an application, contact:

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[https://exair.co/18\\_423](https://exair.co/18_423)



See the Super Air Knife in action.  
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### Blowoff Comparison

Type of blowoff	PSIG	BAR	Comp. Air		Horsepower Required	Sound Level dBA	Purchase Price	Annual Electrical Cost*	Approx. Annual Maintenance Cost	First Year Cost
			SCFM	SLPM						
Drilled Pipes	60	4.1	174	4,924	35	91	\$50	\$4,508	\$920	\$5,478
Flat Air Nozzles	60	4.1	257	7,273	51	102	\$208	\$6,569	\$1,450	\$8,227
Blower Air Knife	3	0.2	N/A	N/A	10	90	\$5,500	\$1,288	\$1,500	\$8,288
Super Air Knife	60	4.1	55	1,557	11	69	\$612	\$1,417	\$300	\$2,329

\* Based on national average electricity cost of 8.3 cents per kWh. Annual cost reflects 40 hours per week, 52 weeks per year. Prices shown are U.S. Dollars.

## BULLETINS

**Novacap**, a Canadian private equity firm, is acquiring an interest in **Mailhot Industries**, a manufacturer of hydraulic cylinders based in Saint-Jacques, Que. All 324 employee positions and management roles will be maintained. Novacap plans to invest in the company's expansion into new markets.

**Xebec Adsorption Inc.**, a global provider of gas generation, purification and filtration technology based in Montreal, is establishing a three-year partnership with **Sapio**, Italy's largest distributor of technical gases. Xebec will design, build, install and service Sapio's upgrading projects from landfills, agri-waste and dairy digesters, and waste water treatment facilities.

Water technology company **River Birch Global Water Inc.** in Toronto has acquired the controlling interest in **Pavilion Water Technology Ltd.**, also in Toronto. Pavilion has a signed long-term joint venture contract to establish, own and operate a scalable water utility business in the Middle East using its proprietary technology to generate potable water. River Birch says this business is in an activation testing phase and is on track for generating revenues in Q1-2018.

The US subsidiary of bus manufacturer **New Flyer Industries Inc.** in Winnipeg was awarded a contract for up to 46 Xcelsior 60-foot compressed natural gas buses for the Fort Worth Transportation Authority in Texas. The contract includes six firm orders with options to purchase an additional 40 buses.

Food company **Conagra Brands Inc.** in Chicago is selling its Del Monte processed fruit and vegetable business in Canada for US\$34 million to **Bonduelle Group**, a French processor of vegetables.

**TÜV SÜD**, a global testing, auditing, inspection and certification services firm, has opened a new regulatory compliance-testing lab in Ottawa. The 23,000 square-foot facility will handle safety, electromagnetic compatibility, wireless and network equipment building systems testing.

## Winpak is Safe Work certified

Plastics manufacturer is now eligible for WSB premium rebates



Winpak's Winnipeg workforce.

PHOTO: WINPAK

**WINNIPEG** — Winpak Ltd. is the first plastic manufacturer in Manitoba to be SAFE Work certified by the province's Made Safe program.

The initiative run by Canadian Manufacturers & Exporters – Manitoba in partnership with SAFE Work Manitoba offers certification that can lead to Workers Compensation Board (WSB) rebates of up to \$3,000 or 15% of premiums.

Certification involves completion of four courses, a gap analysis, an action plan, maintaining a safety management program, and completing an audit.

Audits will follow annually with recertification every three years.

Winpak, a manufacturer and distributor of packaging materials and machines in Winnipeg, celebrated its certification in January by giving each of its 760 employees a t-shirt.

WCB data shows workplaces that implement a certification program experience 42% lower injury rates and 49% fewer workdays taken for time-loss injuries.

SAFE Work Manitoba partners with industry-based safety associations to support certification programs.

## \$2M for three Barrie manufacturers

**BARRIE, Ont.** — The Ontario government has made investments of more than \$2 million from the Southwestern Ontario Development Fund to support three Barrie manufacturers.

Canplas Industries received \$663,700 that will be part of a \$6.4 million investment in state-of-the-art production equipment, new product lines and the addition of 17,000 square feet to its plant.

The company employs 143 people. The project will add 30 jobs.

Canplas specializes in plumbing, ventilation, central vacuum and grease separation plastic products used in residential and commercial buildings all over North America. The planned improvements will help Canplas export to Europe.

Beta Tech Inc., a manufacturer of metal stamping parts, tooling and assembly equipment used in the automotive industry, received \$800,000 that will be part of a \$11.6 million investment in new production technology and equipment, and a 22,500 square-foot addition to its plant. This project will add 45 jobs to the current workforce of 65.

Theta TTS Inc., a full-service parts supplier of stamped metal parts and assemblies to the auto industry, received \$554,000. Its almost \$5 million project includes a state-of-the-art fine blanking press and auxiliary equipment. These changes will double the company's capacity and add 19 jobs to the current 162.

The project is to be completed by June 2021.

## Sellick opens new Harrow plant

Larger factory space, state-of-the-art machinery focusing on new products



A Sellick s150 forklift.

PHOTO: SELLICK

**HARROW, Ont.** — Sellick Equipment Ltd. has cut the ribbon on its new \$21 million plant where it makes rough terrain forklifts for the North

American market.

The 126,000 square-foot factory, geared to new product innovation, improved quality control and flexibility, is located on 13 acres in an industrial park near the old 80,000 square-foot plant.

Improvements include a new machining centre consisting of CNC-controlled laser cutting, milling, and turning machines; automated storage and retrieval systems for raw materials and aftermarket parts; and a state-of-the-art metal preparation and paint line.

"Our long term plan is to increase the business through new product," said president Howard Sellick.

"The sky is the limit on what we can produce in this new facility."

Sellick Equipment is a subsidiary of Avis Industrial Corp. of Upland, Ind.

## Duterte cancels Philippine Bell Helicopter purchase

Concerns of human rights violations by military grounds \$300 million deal



Bell Helicopter's 412EPI in flight.

PHOTO: BELL HELICOPTER

**MIRABEL, Que.** — Bell Helicopter almost had a \$300 million order for 16 of its 412EPI aircraft that would have gone to the Armed Forces of the Philippines until the deal was grounded by political turbulence.

The purchase was facilitated through the

Canadian Commercial Corp., a Crown agency that's responsible for selling Canadian goods to foreign governments.

The aircraft were to be operated by the Philippine Air Force. The company and the Canadian government said they'd be used for search-and-rescue and disaster relief.

But the Trudeau government ordered a review after a Philippine military official said the helicopters would be used for "internal security operations."

The Liberals feared the helicopters would be involved in human-rights violations during operations against terrorists and communist rebels.

Philippine president Rodrigo Duterte responded by cancelling the deal.

Bell Helicopter, a subsidiary of Textron Inc., operates a 638,000 square-foot of hanger, assembly and office space at its Mirabel plant outside Montreal, where 900 people are employed.

## Accord, Pacifica vehicles of the year

Top picks among Canada's auto journalists

**TORONTO** — The Automobile Journalists Association of Canada (AJAC) has proclaimed the Honda Accord and Chrysler Pacifica Canadian vehicles of the year.

The Accord was named 2018 Canadian Car of the Year and the Chrysler Pacifica Canadian Utility Vehicle of the Year at the Canadian International Auto Show in Toronto.

The wins followed testing and two rounds of voting by nearly 100 voting AJAC members who assessed the vehicles in several categories through-

out the year in a variety of conditions. They were scored on performance, features, technology, design, fuel consumption and value for money.

The 14 winners were voted on again by AJAC's members to determine the very best car and utility vehicle. In the second round of voting, they were asked to consider more subjective qualities,



Jean Marc Leclerc, Honda Canada's senior vice-president, accepts the AJAC Car of the Year Award for the 2018 Honda Accord.

PHOTO: HONDA

such as the levels of comfort, convenience and practical performance.

## Metal fabricator fined \$125,000 for fatality

**WINDSOR, Ont.** — A metal fabricator of conveyors in Essex County was fined \$125,000 for the death of a worker in a Nov. 16, 2016 accident involving a crane.

R. J. Cyr Co. Inc., which manufactures conveyors in Maidstone, Ont., entered a guilty plea in a Windsor court for failing to secure equipment to prevent tipping.

The worker was assigned to do touch-up work on a steel frame for a conveyor. The almost 23-foot, 1,228-pound skid was lifted by a five-ton overhead crane from a pile, and placed on its side on a support structure, followed by a second skid. The crane was detached from the skids but they weren't secured to the support structure.

One of the skids tipped as the worker was securing it to the support with clamps. The worker was pinned to the concrete floor and died.

Although there were no witnesses, the accident was captured on a security surveillance video.

The Ministry of Labour investigation found no evidence the worker had been instructed not to disconnect the unsecured conveyor skid from the overhead crane.

The company was found to have failed to follow section 46 of the Industrial Establishments Regulation.

A 25% victim fine surcharge was added to the fine as required by the Provincial Offences Act.

## Ottawa, SAIT and industry partner on micro-CHP

**CALGARY** — The Southern Alberta Institute of Technology (SAIT) is receiving \$385,500 from the federal government to demonstrate micro-combined heat and power (micro-CHP) energy efficiency technology.

The funding will be used to purchase equipment and support resources.

Energy generation produces surplus heat that is usually wasted. Micro-CHP technology will help capture excess heat for use in other applications, such as heating homes or hot water tanks.

SAIT and its industry partners ATCO Gas and Brookfield Residential will evaluate existing micro-CHP technologies to demonstrate how they can be used in Alberta homes. Micro-CHP technology allows homeowners to generate power on site, relying less on the electrical grid while reducing overall greenhouse gas emissions.

The project will include the design, construction, demonstration and evaluation of a Net Zero home in Western Canada.

## \$250M for Quebec alumina refinery

Rio Tinto extending operations past 2020

**MONTREAL** — Rio Tinto is investing \$250 million to extend operations at its Vaudreuil alumina refinery, in the Saguenay-Lac-Saint-Jean region of Quebec.

The project, which extends operations beyond 2022, will include the construction of a filtration plant and the optimization of the complex bauxite residue site in Jonquière.

The Vaudreuil plant supports more than 1,000 jobs in the region and generate \$135 million in annual economic benefits.



A busy employee at the Vaudreuil facility.

PHOTO: RIO TINTO

CAREERS

**Ian Howcroft** has left Canadian Manufacturers & Exporters after 30 years to head up Skills Ontario as CEO, replacing **Gail Smyth**, who has retired. Howcroft is experienced in advocacy, government relations and public policy for the manufacturing and industrial sectors, and he served on the Skills Ontario board from 1999 to 2015.



Ian Howcroft

**Bruce Matthews** is the new CEO of the Consulting Engineers of Ontario. He comes to the post with 16 years of management experience in not-for-profit organizations, including deputy registrar postings at Professional Engineers Ontario, the Real Estate Council of Ontario and the Ontario College of Trades.



Bruce Matthews

Winters Instruments, a global manufacturer of pressure and temperature instrumentation in Calgary, has appointed **Kelly Lessard** executive vice-president of Winters Canada and Europe, Middle East and Africa (EMEA). He was previously vice-president of sales.



Kelly Lessard

Some changes at the Excellence in Manufacturing Consortium (EMC) in Owen Sound, Ont. **Al Diggins** is retiring and moving to a new post as chairman of the not-for-profit's board. **Jim McCoubrey**, a founding member of EMC and previous chairman, shifts to a director's role. Taking over from Diggins as president is **Shawn Casemore**, an EMC member who has been involved in manufacturing, consulting and motivational speaking.

Héroux-Devtek Inc., a manufacturer of aerospace products based in Longueuil, Que., has appointed **Pierre Fitzgibbon** to the board as a director. He's a managing partner at Walter Capital Partners.

Ontario boosts apprenticeship system with a new strategy

Changes to employer incentives, more promotion



End-to-end supports for apprentices and employers.

PHOTO: FOTOLIA

The multi-year plan will provide improved incentives to employers by changing the current training tax credit into a graduated apprenticeship grant; stream more career information through Ontario's labour market website; update the apprenticeship system with digital enhancements, including a simplified online registration process; develop recommendations on how to ensure students are aware of career opportunities in the skilled trades; and enhance services that support apprentices.

There were 25,000 active employer sponsors in 2016-17 and new annual apprenticeship registrations have grown from 17,100 in 2002-03 to 24,800 as of last year.

Approximately 9,800 Certificates of Apprenticeship have been issued annually over the past three years.

**TORONTO** — Ontario is tuning up its apprenticeship system with a new strategy that will boost incentives for employers and attract more interest from students deciding on career choices.

The multi-year plan will provide improved

CED funds for Quebec plants

**LAVAL, Que.** — The federal government has been busy handing out funding in Quebec through its Canada Economic Development (CED) agency.

Viau Food Products, a food manufacturer of pepperoni and deli meats, has received \$2.1 million in repayable funding to help improve the efficiency of its operations in Laval, Que.

The family business is investing in state-of-the-art equipment, adding additional line capacity to support its growth and investing in new lines to broaden its line of products. This should create 125 jobs in the greater Montreal area.

Repayable funding of almost \$2.5 million was also distributed to eight other Quebec manufacturers:

- Plastrec Inc., a producer of food-grade recycled PET resin, gets \$1 million for a \$8

million project to improve production with specialized equipment.

- Industries UDACO Ltd., a fabricator of steel parts, received \$332,820. Its total investment of more than \$1 million will complete the automation and digitization of its production.
- Composites VCI Inc. makes large-scale composite material parts for equipment manufacturers in the aerospace, renewable energy and public transportation industries. Its \$272,500 is part of a \$545,000 investment in an automated machining cell.
- Robert Hydraulique Inc., a manufacturer of insulated, telescopic aerial ladders, gets \$268,600 for a \$951,000 project that involves R&D for a new product, and a marketing strategy for the US market.
- Usinage CNC Production

Photon Control sells OFM line

Frees up engineering and plant resources

**VANCOUVER** — Photon Control Inc. has sold its optical flow meter product line to King's Energy Services in Red Deer, Alta.

The Vancouver manufacturer of optical technologies for the global semiconductor industry said the sale includes all OFM technology, inventory and equipment, and the licensing of patent rights.

"This transaction allows Photon Control to ... free up both engineering resources and manufacturing capacity," said Scott Edmonds, president and CEO.

King's Energy Services is a supplier of instrumentation, valve products and services throughout Canada.

Photon Control manufactures optical sensors and systems to measure temperature and position.



Manufactures for OEMs of wafer fabrication equipment.

PHOTO: PHOTON

Inc., a provider of machining services, will put the CED's \$225,000 toward its almost \$1.2 million productivity project that includes new digital equipment.

- Devolutions Inc., an information and communication technologies company that helps companies improve their security, gets \$206,900 to put toward a total investment of \$757,000 in computer equipment.
- Biexo Inc., a manufacturer of tanks used to store automotive fluids, gets \$106,740. Its \$420,000 production project involves the automation of a welding cell.
- Apogee Trailers is a start-up manufacturer of trailers that needs to buy production equipment. Half of its \$150,000 project will be CED funds that will be used to purchase an MIG welder, a TIG welder, a folder and an industrial ventilation system.

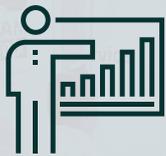


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## GPS FAST FACTS



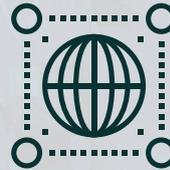
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## Ballard powers Shanghai delivery trucks

Also scores a purchase order for SPM-622 power management kits

**VANCOUVER** — Ballard Power Systems announced a couple of business victories in the first quarter. One involves a field-deployed power management device for the military.

Protonex, Ballard's US subsidiary, has received a \$1.6 million purchase order for Squad Power Manager (SPM-622) kits for the US Special Operations Command. This is the first purchase order for the field power management technology following Milestone C approval last year.

The device, weighing less than a pound, enables military units to optimize power from an available battery for various power electronics devices – including portable radios, GPS systems, medical devices, explosive ordinance devices equipment, computers and other electronic equipment.

It recharges that battery from solar, vehicle, AC or scavenged energy sources.

To date more than 5,000 units have been deployed by the US and NATO.

Another win involves its FCvelocity-9SSL hydrogen fuel cell stacks. About 500 licensed electric commercial trucks using the stacks are planned for deployment in Shanghai, China.

Shanghai Reinventing Fire Technology Co. Ltd. designed and integrated a 30-kilowatt fuel cell engine for each of the Dongfeng Special Vehicle box van trucks. The vehicles have a 3.2-ton capacity and will have a range of more than 330 kilometres.

The trucks will be operated by Shanghai Sino-tran New Energy Automobile Operation Co. Ltd.



The Protonex SPM-622.

PHOTO: BALLARD

Guangdong Synergy Ballard Hydrogen Power Co. Ltd., a joint venture in Yunfu, Guangdong Province, is manufacturing the stacks.



## PLANT ONLINE

### SOUNDING OFF

What readers have to say about breaking news

Have you checked out **PLANT**'s daily news online? Here are some headlines that have inspired members of the Canadian manufacturing community to chime in. They're edited, but use the links to see the raw – and for some – longer versions of their remarks plus the stories that inspired their reactions.

Stay up-to-date on the developments – domestic and global – that affect Canada's industrial sectors by watching the news feed at [www.plant.ca](http://www.plant.ca) or reading **PLANT**'s twice-weekly newsletter (hit Subscribe on the website).

#### Canada will do what it must to prevent BC from stopping pipeline: Carr

<http://www.plant.ca/ouZzP>

Carr is a "loose cannon" and should learn to keep his mouth shut, until the Federal Court of Appeals renders its decision.

#### Trudeau talking to premiers about Trans Mountain pipeline battle

<http://www.plant.ca/3jk5X>

The Kinder Morgan pipeline must be built immediately. There must be no restriction of the pipeline's designed capacity. The actions of John Horgan and Andrew Weaver are an obstruction that increases cost and sends a very negative

message to investors and to the energy industry. The Northern Gateway Pipeline cancellation was a huge mistake. Many in the aboriginal community were pressing for better terms for their future, they weren't against the pipeline. The energy industry in Alberta was the economic engine of Canada and the principle contributor to equalization payments.

#### Alberta to suspend electricity purchase talks with BC

<http://www.plant.ca/BC2JO>

Trudeau states, "KM's pipeline is not a danger to the BC coast" because once the dirty tar sands are loaded onto the tanker,

Kinder Morgan has no liability. The tankers transiting Vancouver harbour and the Gulf Islands will be a danger to BC's coastline.

#### Federal analysis outlines how extra EI benefit program topped \$1.92B

<http://www.plant.ca/pxxkb>

Only in government and weather are you allowed to make this kind of mistake and not get fired. Anyone else would...

#### Pipelines, not carbon taxes, bigger factor in energy competitiveness: report

<http://www.plant.ca/aLnof>

Pipelines for both gas and oil are absolutely essential. Environmental protesters, often funded by American foundations, are sabotaging our energy industry to the benefit of American energy producers. The Northern Gateway Pipeline should have been installed years ago. The Kinder Morgan pipeline should be completed asap. Federal and provincial leaders should focus

on Canada's financial future rather than pandering to environmental focus groups.

#### Campbell Soup shuttering 87 year old Toronto facility, 380 jobs to be impacted

<http://www.plant.ca/K7Fsw>

Free trade, globalization, out of control electricity rates and totally messed up employee standards regulations have all conspired to close this historic facility. I ask that the city demand all documents related to the plant ... sent to the city archives for future generations to study. ...Thank you Kathleen Windbag. Yet another success story on how her Liberal policies are helping our province. But don't worry, all the hard working blue collar employees can now go and apply at Tim Horton's or Sobeys. Oh wait, they're cutting staff and hours because of the new Windbag regulations. Oh well, there's always welfare. I'm sure that will cheer up those who just lost their jobs.

## US tax reform

What it means for Canada

The passage of the Tax Cuts and Jobs Act (TCJA) by the US Congress will erode Canada's competitive corporate tax advantage, but there are nuances.

In a detailed note, TD Economics discusses the implications of the legislation.

Authors Derek Burleton, deputy chief economist, and Brian DePratto, senior economist, identify the most important factors are reduced statutory corporate tax from 35% to 21%, a cap on interest expense deductions and a tax on un-repatriated foreign earnings.

How will this affect Canada's tax competitiveness and investment?

As of 2016, Canada's marginal effective tax rate (METR) on corporate investment has been as much as eight percentage points lower than the US rate. US tax cuts lower the rate from 28.4% to 18.8% versus Canada's 20.3%.

But there are two factors that suggest the US advantage will be temporary.

Personal tax cuts end in 2025 and full expensing of capital investment expires in 2023. By 2023 to 2027, corporate METR will rise above the rate that would have prevailed under prior legislation. And projections of a "sharp deterioration" in the US federal deficit increases the risk of tax hikes over the longer term, although it's possible cuts will be extended.

Should we expect an investment exodus to the US?

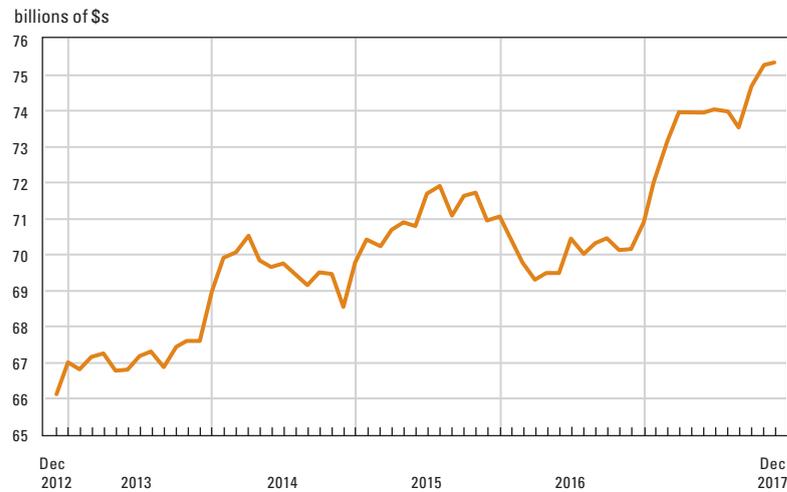
The economists see the risk as significant near term, but there are factors that lessen the likelihood: the US is operating at full capacity, although Canadian companies might struggle to set up shop with a reasonable return; the TCJA's temporary elements and uncertainty about future tax rates should give companies pause about investing in the US; and Canada's economy is doing well, reflecting US growth prospects and the trade benefits that flow to Canada.

Rather than a near-term exodus of investment, there will likely be longer-term bleed in capital flows. Burleton and DePratto conclude greater difficulty attracting and retaining investment would impact Canada's longer-term growth prospects.

# PLANT PULSE

## ECONOMIC DEVELOPMENTS AND TRENDS

### INVENTORY LEVELS RISE IN DECEMBER



Source: Statistics Canada

December's manufacturing inventory levels were up by 0.1% to \$75.3 billion with eight industries showing increases, reports Statistics Canada. The inventory-to-sales ratio rose from 1.35 in November to 1.36. Sales declined 0.3% to \$55.5 billion in 11 of 21 industries (57% of the sector). Drivers were petroleum and coal products, and food. Seven provinces saw declines, including Quebec (by 1.1% to \$13.2 billion). Ontario increased 1.2% to \$25.7 billion while Alberta sales rose 1.2% to \$6.2 billion. Unfilled orders fell 0.7% to \$86 billion, driven by aerospace products and parts, and other transportation equipment. New orders were up 0.3% to \$54.9 billion.



# 5,000

Number of cleantech companies in Ontario, with \$19.8 billion in revenue and 130,000 employees, according to the Ontario government.

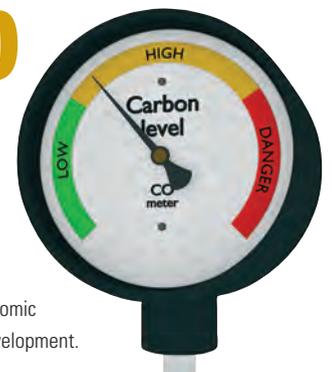


# \$6.6 BILLION

Manufacturing's share (32%) of all business enterprise research and development investments in 2016, says Statistics Canada.

# 15.6

Tonnes of carbon dioxide produced per capita in Canada as of 2014 (latest available numbers), according to the Organisation for Economic Co-operation and Development.



# 8%

Battery electric vehicles' share of global auto sales by 2025, rising to between 17% and 19% by the end of the decade, reports Moody's Investors Service.



# 79%

Percentage of senior manufacturing executives who identify machinery, equipment and technology as their top choice for investment over the next three years, according to the PLANT Manufacturers' Outlook 2018 survey. Training was noted by 68%. Average investment is more than \$1 million. Fifty-two per cent say they will drive growth by investing in machinery, equipment and technology, 49% will spend on innovation and 45% will introduce new products.

# BATTLE for the FUTURE

## FIGHTING FOR ONTARIO'S INDUSTRIAL HEARTLAND

Automatic Coating is sticking around but Jocelyn Bamford worries others are heading south.

BY JEFF BROWNLEE

Faced with a growing list of uncompetitive business conditions fuelled by a recommendation by one of Canada's top universities to expand operations south of the border, Jocelyn Bamford and husband Brad were faced with a difficult choice about the future of their family-owned company located in Canada's industrial heartland.

"We were looking at the best options to grow our company and the numbers worked much better for us if we relocated to the US," says Jocelyn Bamford, vice-president of Toronto's Automatic Coating Ltd. "So, we had to make a very tough decision – leave and relocate to the United States or stay here and fight."

Ultimately, they opted to battle it out, because after more than 50 years in business and supporting their local community, it was the "right thing to do."

"I've never been one to take the easy way out," she says. "So, Brad and I decided to stay here and fight not just for the future of our company, but for the future of manufacturing in

Ontario."

The decision to grow in Canada not only laid the foundation to build a stronger future for the 85-employee powder coating company in Toronto, but also gave birth to a new voice for manufacturing in the province. Bamford is the founder of the Coalition of Concerned Manufacturers & Businesses of Ontario.

And it's not a small battle as Bamford soon discovered.

"There's zero strategy to maintain, never mind grow businesses here," she says. "Governments have basically piled on their policies that really make it uncompetitive to run a business in the province."

Case in point – hydro costs.

After analyzing her company's hydro bill two years ago, she discovered a mysterious charge called the global adjustment.

"I looked at my bill and wondered what the heck that was," she says. "No one could tell me so I started talking to other manufacturers and suppliers and they had the same concern about their ballooning hydro costs."

The global adjustment charge was a product of Ontario's 2009 Green Energy Act. In a nutshell, it was an attempt to subsidize the production of green electricity production in addition to



Top: Jocelyn Bamford before an expanse of freshly coated fire hydrants.

Top right: Hanging a frame for prep. Below left: Powder coating a frame.

Bottom right: Curing frames in an infrared oven.

PHOTOS: SILVANA METALLO





ada's industrial heartland would require companies to come together and tell their stories with one, united voice.

"Every one of those companies had the same story and it was scary," says Bamford. "They were expanding outside of Ontario because it was a pain to do business here."

That was the catalyst for creating the Coalition in August 2016. Today, it has 140 members and the number of concerned voices continues to grow, weekly.

The overarching challenge, according to Bamford, is that there's an apparent disconnect between government and industry.

"Governments don't really understand what it takes to run a business," she adds. "Many politicians are career politicians with a real lack of business experience. To me that's a recipe for disaster."

She says that's not more evident than the commentary surrounding Ontario's minimum wage increase and the scolding by some politicians, namely Barrie MPP Ann Hoggarth, about the need for companies to re-evaluate their business model if they can't afford the minimum wage hike.

"I don't think anyone's complaining about raising minimum wage, but comments like those are totally unacceptable," she says. "In reality, Bill 148 (Fair Workplaces and Better Jobs Act) was too much, too soon for Ontario companies and made companies that were profitable, unprofitable."

Bamford, who was originally destined for a white-collar job as a journalist, understands industry has to embark on an educational crusade to ensure that decision makers understand the value as well as the economic importance of manufacturing. She had no interest in the industry herself until Brad took her on a special outing.



financing government conservation programs. It also paid energy producers to not produce a surplus of electricity that could overload the system and result in a blackout. All of these costs were passed on to the consumer.

"My effective hydro rate was 20 cents and I looked at other jurisdictions where it's seven to eight cents," Bamford adds. "It was crazy."

### Fact versus feelings



She assembled approximately 30 concerned companies to meet with Brad Duguid, the economic development minister at the time, to discuss this as well as other pressing issues. Aside from receiving government talking points that everything is "fine" and an apparent lack of understanding about running a business in Ontario, she knew the fight to keep Ontario as Can-

“My husband was so proud of his business that he took me on a date to the factory,” she says. “I told him that’s pretty cool, but I had no understanding of what ACL did until I got in the business and my perception quickly changed.”

In addition to the disconnect between industry and government, the political narrative in this country has changed from an era when decisions were made based on facts.

“There’s such an ideological bend to everything now and we are making policy based on feelings, not facts and I say that’s at the expense of jobs and the economy,” Bamford says. “I don’t think the vast majority of people care if we call it personkind or mankind, but I know they care if they have a job and if their kids have jobs. So, let’s stop this and let’s get back to business.”

### Focus in innovation

Focusing on business for Automatic Coating hinges on innovation, an element of the culture from the early days as an appliance repair shop in the garage of Brad’s grandparents. The core business began with rewiring electric motors, but Brad’s father soon realized those armatures required insulation and powder coating is a great insulator. He travelled to Europe and brought back the technology that quickly helped the company emerge as a leading powder coater in North America.

Over the past 50 years, that commitment to innovation saw ACL perfect many powder and liquid-coating techniques originally used on household appliances and has expanded to become the leading industrial corrosion applicator in North America. It’s also moved from offices in the garage to a 70,000-square-foot facility in Scarborough.

“The name of the game for us is innovation,” says Bamford. “We’re constantly reinventing what we do here out of necessity.”



*Inspecting a part in the ACL lab.*



*Preparing a pipe valve for loading.*

That was more apparent with the Great Recession of 2008 – a turning point for the company. With the automotive supply chain in North America under extreme pressure and many companies moving production out of Canada, it was a great blow to the business and time to shift the innovation gear into overdrive.

“We looked at what isn’t easily moved offshore and quickly realized that pipeline coating was a growing industry,” she adds. “We’ve grown steadily through innovation and because we’ve developed patents and new technologies that have helped us continue to grow.”

Today, the company has patents in the pipeline, and

mining and marine sectors and does work for the Canadian and US navies. One of its competitive advantages is the ability to perform in-field coatings for pipelines in Western Canada. Technology developed for the mining industry has a global footprint as many Canadian companies operating around the world, specifically South Ameri-



Jocelyn and Brad Bamford, president of Automatic Coating.

ca, have relied on ACL's proprietary innovation to extend the life of a mine plate. In addition, Automatic Coating has branched into building equipment for navies worldwide that extends the life of their parts and reduces maintenance costs.

Innovation aside, it doesn't matter how great a certain technology is. Success hinges on customers and the integration of supply chains.

"I know ACL doesn't operate on an island and the manufacturing sector is very much an ecosystem in this province," she says. "My livelihood as well as the livelihood of other companies hinges on a strong industry. That's why I chose to start the coalition and fight for what I believe in."

Championing manufacturing is consuming a lot of time and taking her away from ACL's day-to-day operations. She has

asked herself many times if it's worth it, but the answer is always the same.

"The government doesn't want to listen and they're not doing anything to help manufacturing, because they are focusing on feelings instead of facts," she says. "I'm making decisions not just for me, but for all of my employees and all of their families. I can't let a politician who was a schoolteacher make decisions that will decimate our industry. I'm not going without a fight – a fight for all of those people and an industry I understand and care about."

For more information on the Coalition for Concerned Manufacturers & Businesses of Ontario, visit [www.ccmoo.ca](http://www.ccmoo.ca) and [www.facebook.com/CCMOO1](https://www.facebook.com/CCMOO1).

Comments?

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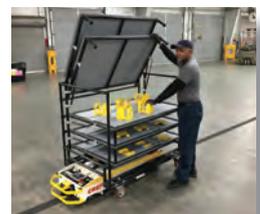
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They warn of NAFTA complications, but Japanese OEMs say the trade deal will level the playing field.

BY JEFF BROWNLEE

As the Canadian government switches its public relations machine lauding the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) into overdrive, the Canadian automotive industry, parts manufacturers as well as the country's largest union are standing on the brake pedal and raising many red flags about the trade deal.

Despite a side letter to the agreement that International Trade Minister François-Philippe Champagne says will give Canada unprecedented access to the highly protective Japanese market through the elimination of non-tariff barriers, many of the players in Canada's automotive sector are concerned. The Canadian Vehicle Manufacturers' Association (CVMA), the Automotive Parts Manufacturers' Association (APMA) and Unifor, Canada's largest private-sector union, say the 11-country agreement that represents a market of \$495 million and GDP of \$13.5 trillion is a bad deal for Canada's auto sector, especially in the wake of NAFTA renegotiations.

"Minister Champagne's claim that Canada has the largest market access to the Japanese market for auto manufacturers is a bit of an over-exaggeration that attempts to sell what is, on balance, a bad trade deal for Canada and especially bad for the auto sector," says Angelo DiCaro, Unifor national representative and trade policy analyst. "Canada exports virtually no cars or parts to the Japanese market. In fact, we import \$5.5 billion in auto goods from Japan each year, while they buy back about \$30 million. That means we sell to Japan in one year



Working on vehicle subassemblies at FCA's Brampton, Ont. plant.

PHOTO: FCA

# CPTPP gets a RED FLAG

## MANY IN THE AUTO INDUSTRY ARE CONCERNED

what they sell to us every two days. It's a gross imbalance that a trade agreement can hardly help fix – but it certainly can make things worse."

In a nutshell, the CPTPP reduces Canada's 6.1% import tariff for all CPTPP countries to zero over four years and requires a fully-assembled vehicle to have 45% regional content to be considered duty free. The content requirements for parts will range between 35%

to 45%. Current regional content requirements in NAFTA stand at 62.5% cent for vehicles and 50% for parts. During the current NAFTA renegotiation, the US is pushing for even higher content levels.

"The danger of signing the CPTPP is that it sends mixed signals to US and Mexican negotiators. On auto rules, NAFTA talks are moving in a completely different direction, with parties looking to raise content

levels instead of loosen them," says DiCaro. "The problem is that Mexico and the US were part of the group of nations that negotiated the original TPP. That certainly makes any pitch for higher standards in NAFTA a lot more difficult, especially when you're staring across the table at the same group of negotiators."

And that's also troublesome for Flavio Volpe, president of APMA, who says that we can't be in two boats at once. Volpe has been constantly raising red flags about the impact on NAFTA renegotiations, access to the Japanese market and the impact on the Canadian auto sector. He took to Twitter Feb. 20 – the day complete text of the agreement was released – to point out some key challenges in the Canadian government's own economic analysis, published the same day.

"The report states that US

imports into Canada would now drop \$3.3 billion through 2040, mainly in automotive. Never mind that those cars have Canadian parts – if correct, that’s a gap that smart US negotiators could then be seeking to close in NAFTA 2.0 final terms. One pocket to another,” Volpe tweeted. “The net CPTPP auto and auto parts gain claimed is only \$172 million by 2040. Contextually, the Canadian auto sector ships \$85 billion in goods annually. This huge 22-year increase represents approximately 0.2%. If you account for inflationary dynamics, this actually represents a decline in real dollars.”

That reinforces the concern of Mark Nantais, CVMA president, that access for automotive exports from domestic factories to the CPTPP markets has not been materially improved by the agreement.

“Canada’s trade agenda needs to ensure our large manufacturers get fair reciprocal access to the markets of our trading partners before we further open up Canada’s market to companies that do not manufacture in Canada or employ significant numbers in Canada,” he says. “Otherwise this is a harmful one-way street for automakers who invest billions in Canada.”

Ontario Premier Kathleen Wynne says that she knows the agreement will have consequences for the auto sector, especially on jobs.

“I have been clear that new opportunities for trade should not come at the expense of these workers. That would not be fair. It would hurt Canada’s competitiveness,” she said at the Toronto Board of Trade Feb. 22. “And frankly, as a country, we

haven’t always got it right when it comes to properly dealing with the challenges of trade deals while benefitting from the opportunities.”

She called on the federal government for \$1.26 billion over the next decade and the government should only ratify the deal after it has worked with Ontario to put in place the transitional funding for workers.

### Consumer choice

However, Japanese auto manufacturers in Canada don’t agree with their domestic competitors. They say the agreement levels the playing field and will ultimately provide better options for the consumer.

“CPTPP is simply a matter of fairness – equitable tariff treatment for all automakers in Canada. For the Canadian auto industry, CPTPP will provide guaranteed, preferential market access to Japan and the other CPTPP members, an improvement over the original TPP,” says David Worts, executive director of the Japanese Auto Manufacturers Association (JAMA) Canada. “CPTPP will not only further diversify and enhance trade opportunities, it will also provide an important first-mover advantage for Canadian exporters and send a positive message to investors by restoring a level playing field on vehicle tariffs for the benefit of Canadian consumers. Open competition will bring greater choice, along with innovations in vehicle safety, lower emissions, higher fuel efficiency, alternative power trains as well as the promise of enhanced mobility and reduced congestion through connected and autonomous vehicle tech-

## How CPTPP will impact trade

Phased tariff elimination will apply for all vehicles and vehicle parts into CPTPP markets. Japan is already designated a most-favoured nation (MFN) duty-free.

Canada’s 6.1% tariff on passenger vehicle imports will be phased out over four years through five annual back-end loaded cuts to retain greater tariff protection during the first two years – higher protection than in the Canada-Korea FTA and CETA deals.

Tariffs of up to 8.5% on auto parts will be eliminated upon entry into force of the agreement

Canada’s bilateral automotive agreement with Japan includes a safeguard mechanism that applies in cases of import surges, binding accelerated dispute settlement procedures, and the establishment of a bilateral committee on motor vehicle trade to discuss issues and investment.

Canada has negotiated a more liberal rule of origin for motor vehicles with Australia and Malaysia to ensure that Canadian manufacturers benefit from preferential tariff treatment in these markets.

Commitments on standards and regulations will address non-tariff measures that prevent Canadian companies from realizing their full export potential.

### With the US

Canadian exports to the US (not part of the CPTPP) aren’t expected to change significantly. However, there would be a decline (\$3.3 billion) in imports from the US led by automotive products, resulting from erosion of the US’s NAFTA preferences in the Canadian market.

### By sector

Overall, Canada’s exports to the world would expand in beef, pork, vegetable oils, wood products, motor vehicles and parts, machinery and equipment, and services. Increases in imports would be dominated by apparels, leather products, chemical products and machinery and equipment.

nologies.”

Nevertheless, Unifor remains convinced the new trade deal is moving the Canadian auto industry in the wrong direction.

“It’s difficult to determine the total impact this will have on Canada’s autoworkers. All we know is that it is likely to make a bad trade situation between Canada and Japan even worse,” DiCaro adds. “Nothing that’s been negotiated, or said to have been negotiated, will make it better. The CPTPP will not mean new auto jobs in Canada, only fewer.”

However, Worts says CPTPP will open new doors of opportunity for Canadian companies.

“As a country that relies on global trade, Canada’s focus must be on building bridges, rather than barriers,” he adds. “This agreement brings sig-

nificant new opportunities for Canadian companies in all the CPTPP member states.”

But Volpe concludes that the government’s own math on the economic impact of the agreement reinforces his biggest fear.

“To me this very brief report confirms our concerns for the erosion of competitive dynamics for auto in Canada,” he says. “Side letters that exist outside the actual CPTPP agreement [that] do not address barriers inventoried by industry are meaningless – like a fancy napkin stapled to a contract.”

*Jeff Brownlee is an Ottawa-based communications specialist and writer. E-mail jeff@rainmakermedias.ca.*

**Comments?**  
**E-mail jterrett@plant.ca.**

## CPTPP by the numbers

- 11 countries: Canada, Australia, Japan, Chile, Peru, Malaysia, Mexico, Brunei, Vietnam, New Zealand, Singapore
- 495 million people
- Combined GDP of \$13.5 trillion
- \$105 billion, Canada’s bilateral trade with the 10 other CPTPP in 2016
- \$4.2 billion, projected increase to Canada’s GDP

# Digital wave is COMING

...AND BUSINESSES ARE ON  
THE VERGE OF TRANSFORMING

MNP study finds it's  
topping corporate  
strategic agendas.

Manufacturers have not  
been quick to embrace  
Industry 4.0 but the  
digital revolution is on the verge  
of sweeping across nearly all  
businesses, according to a  
MNP study.

Canadian decision-makers  
from across several industry

groups, including manufactur-  
ing, say digital transformation  
tops the strategic agenda.

The study, conducted by Ipsos  
for the Calgary-based account-  
ing and consulting firm, shows  
86% of businesses are experienc-  
ing or anticipate a transforma-  
tion in the next 12 months. Al-  
most as many (83%) say at least  
one technology advancement  
is underway, with the majority  
planning to increase investment  
in a range of innovations over  
the next 12 months.

“Our results indicate the start  
of an important shift but there  
needs to be a real sense of ur-  
gency. In terms of technological  
readiness and digital competi-  
tiveness, Canada is languishing  
behind,” says Trent Bester,  
MNP’s senior vice-president,  
consulting.

The national report based  
on a survey of 1,200 business  
leaders cited the digital revolu-  
tion as the biggest external force  
driving the transformation. Most  
indicated whole functions and  
even the very nature of their  
businesses are evolving.

But many are struggling to  
keep up: 93% of the surveyed  
businesses face some form of  
barrier. Challenges with budgets  
were noted by 42%, followed by  
time and staff (32%) and skills/  
expertise (27%).

Platform integration heads  
the list of initiatives underway  
for 38% of respondents, par-  
ticularly cloud-based services  
(68%). Digital enhancements to  
products and services, such as  
the development of new apps  
or cloud delivery, are a close  
second (36%).

While artificial intelligence  
is already embedded in many  
mainstream technology solu-  
tions, it has not yet caught the  
focus of decision-makers. Only  
16% report a current level of  
activity in its development.

Download *Capturing the  
Change Wave: How Canadian  
Businesses are Transforming*  
at [mnp.ca/transformation](http://mnp.ca/transformation).

Comments?

E-mail [jterrett@plant.ca](mailto:jterrett@plant.ca).



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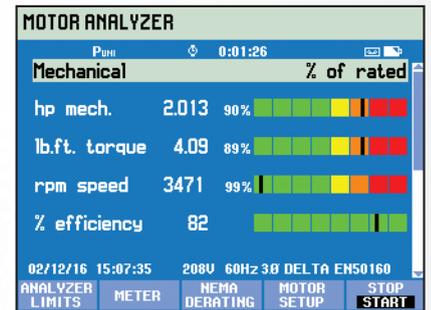
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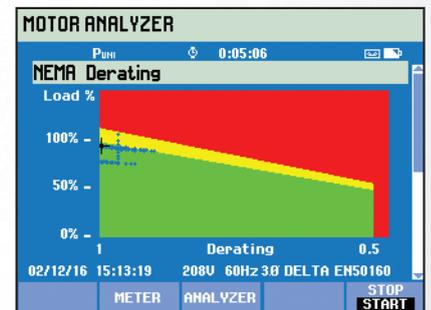
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## TRAINING

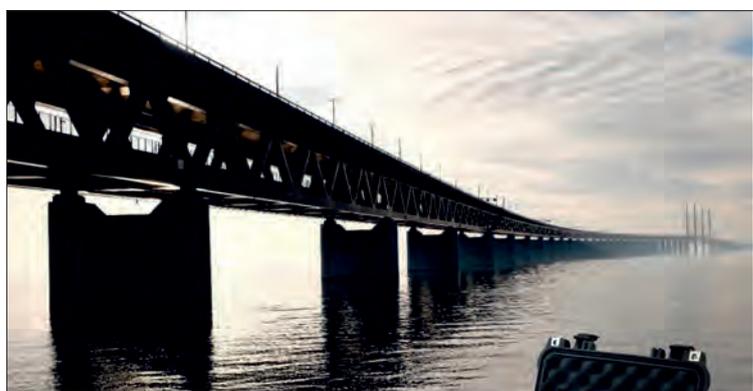


Solving process problems.

PHOTO: FOTOLIA

# Train problem SOLVERS

## ...AND HELP QUESTION ASKERS FIGURE IT OUT



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Standard and Advanced Bodies available.



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How supervisors respond to questions trains team members to find the answers themselves.

BY HUGH ALLEY

Two supervisors walked into my office. "Boss," they began, "What should we do?"

My answer would train them to do one of two things based on what they need: come to me for answers, or to solve their own problems.

Sometimes, your staff members need answers. When you're five minutes from a shipping deadline, or someone's health is at risk, it's time for a decision, not a lesson. But most of the time, things aren't that serious. Most of the time your staff need to learn how to solve problems. That doesn't happen when you always provide the answer.

A supervisor once explained his job as answering all his team members' questions. But after hearing comments from others in the class, he realized he didn't need to know all the answers, just who might have them. His face visibly relaxed as he understood the implications of this different view of the world where the focus would be on ensuring the team found the best answer in the time available. For him, it was a big step. But it didn't go far enough.

### Ford's way

As George Friesen, a business practice leader at St. Louis Community College suggests, it comes down to whether you believe Henry Ford (you know who he is) or Frederick Taylor (one of the originators of mass production thinking). Here are your choices:

"If you want to know how to improve work processes, talk with the people who do the work," said Ford; or Taylor, who said, "Anybody stupid enough

to work in <insert your industry here> can't possibly understand how to make his work more efficient."

If you believe Taylor, you will have to answer questions forever because you'll train people to come to you for solutions.

If you think Ford is closer to the mark, you can respond in a way that trains team members to solve their own problems. I put my money on Ford.

When my supervisors posed that opening question, they were smiling because they knew what my response would be. These two were well along in their development. They knew how to solve problems and had worked out a good solution.

My answer? "What questions do you think I will ask?"

They listed all the questions they had addressed. I didn't wait to hear their answers. The fact that they knew the right questions was all I needed to be confident that their solutions would be fine.

"Get out of here and get on with it," I said with a smile. And they did, laughing as they left.

If you're unsure how to train people to be problem solvers rather than question askers, there are many excellent resources.

One of the best starting points is to explore the concept described in Mike Rother's book, *Toyota Kata*. Or you can get lots of resources from Mike's home page at [www-personal.umich.edu/~mrother/Homepage.html](http://www-personal.umich.edu/~mrother/Homepage.html).

*Hugh Alley is an industrial engineer based in the Vancouver area who helps organizations achieve significant performance gains in delivery, quality and cost over a short timeframe. Call (604) 866-1502 or e-mail [hughralley@gmail.com](mailto:hughralley@gmail.com).*

Comments?

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## What the amendments mean for Ontario manufacturers.

BY MATTHEW BADROV

There are many components to Bill 148 that will have a significant impact on Ontario manufacturers but five amendments to Ontario's Labour Relations Act (LRA) have the greatest potential to affect how your company does business.

The following LRA amendments came into force on Jan. 1:

### 1. Access to employee list.

A union may apply to the Ontario Labour Relations Board for access to a list of employees in a proposed bargaining unit. If the employer disagrees with the proposed bargaining unit or the union's estimate of employees stated in the application, the employer must, within two days of the application, serve on the board and union a notice of disagreement.

If it's satisfied the union's proposed bargaining unit could be appropriate and the union appears to have the support of at least 20% of the bargaining unit, the board may order the employer to produce the list. The list is to contain each employee's name, phone number and – if available – personal e-mail address. The employer may also be ordered to provide additional employee information (such as job title) and any other means of contact provided by the employee (except home address).

The employer and union must take all reasonable steps to protect the list's security and confidentiality. The list is to be disclosed only to the appropriate union officials and used for the campaign to establish bargaining rights.

The impact of this amendment is likely to be at least two-fold: it may make it easier for a union with access to contact infor-



Labour Relations Act amendments are now in force.

PHOTO: FOTOLIA

# Labour and BILL 148

## FIVE POINTS THAT CAN IMPACT YOUR COMPANY

mation to organize part-time or casual employees; and it will likely result in an additional layer of litigation at the board over whether the union appears to have the required support. It remains to be seen how employees will react to a union being provided access to their contact information without their knowledge or consent.

### 2. First contract mediation/arbitration.

An employer or union now has access to mediation and mediation/arbitration in the context of a first collective agreement on request. Either party may apply for the appointment of a first agreement mediator at any time after the Minister of Labour has issued a "no board" report. After the application is filed the minister must appoint a mediator. During the 45-day

period following the mediator's appointment, neither party may engage in a strike or lockout. If the parties have not reached a collective agreement after 45 days, either party may apply to the board for first agreement arbitration. The application may be dismissed, further mediation ordered or the parties directed to first contract mediation-arbitration.

Any pending displacement certification application or application to terminate bargaining rights, even if filed before an application for the appointment of a mediator, must be temporarily suspended pending the completion of the first agreement mediation and arbitration process. Where mediation-arbitration is ordered, neither party may commence a strike or lockout and any ongoing strike or lockout must terminate.

Automatic access to mediation and mediation-arbitration will significantly impact how parties negotiate a first collective agreement. Even if a trade union can't maintain support among the bargaining unit employees, including when there's genuine opposition among them, it can nevertheless secure a first agreement through the arbitration process without ratification by the employees.

This amendment significantly enhances the power of a trade union to secure demands without the support of the employees in the bargaining unit. In addition, a trade union could unilaterally stop an otherwise timely termination or displacement application by simply making the request for the appointment of a first contract mediator.

### 3. Bargaining unit consolidation.

A union (or employer) may apply to the board to have a newly-certified bargaining unit consolidated with an existing unit of an employer represented by the same union, provided the union and employer have not entered into a collective agreement with the newly certified unit. The board may subsequently consolidate the units, amend the bargaining unit description, or order the existing collective agreement be applied to the newly certified

unit or terminate a collective agreement. Additionally, a union and employer may make joint application to the board to modify an existing bargaining unit structure, which may include consolidating units, amending collective agreements to address a consolidated unit and terminating a collective agreement in existence prior to any consolidation.

Consolidating of bargaining

units may raise a host of issues relating to – for example – the integration of seniority lists, job classifications and wage rates. The power to consolidate during or after certification also includes the power to order the existing collective agreement apply “with or without modification” to the newly certified bargaining unit if it’s consolidated with an existing unit.

Employee choice can be

compromised whenever a labour board is given the power to alter the scope of an existing bargaining unit. Smaller groups of employees that initially had a say whether or not to be unionized lose their voice as larger units swallow them.

**4. Return to work post-strike.** An employer will be required to return an employee to work following a

strike or lockout, regardless of how long the employee may have been out of the workplace.

The obligation to return striking employees and displace those hired to do the work during the strike or lockout is generally dealt with by agreed upon return to work protocols. The amendment will only impact an employer involved in a particularly long strike or lockout where the only obstacle to settlement is the displacement issue.

**5. Enhanced “just cause” protection.** An employer will be required to prove “just cause” where it terminates or disciplines an employee following certification, or following the commencement of a lawful strike/lockout. In both cases, this protection ends once the parties have reached a collective agreement or the union ceases to represent employees in the bargaining unit.

The practical result of this provision is a probationary employee will often have greater protection against dismissal prior to a collective agreement coming into effect than after the agreement is in force.

There are also several significant amendments to the Employment Standards Act that will impact Ontario manufacturers. Each of these amendments and additional amendments to the LRA are addressed in, *Bill 148 Fair Workplaces, Better Jobs Act, 2017 Executive Summary* at [www.sherrardkuzz.com/pdf/20180110\\_cwr\\_and\\_bill\\_148\\_executive\\_summary.pdf](http://www.sherrardkuzz.com/pdf/20180110_cwr_and_bill_148_executive_summary.pdf).

*Matthew Badrov is a lawyer with Sherrard Kuzz LLP, an employment and labour law firm representing management. E-mail [mbadrov@sherrardkuzz.com](mailto:mbadrov@sherrardkuzz.com). Call (416) 217-2221, (416) 603-0700 (main) or (416) 420-0738 (24 hour). Visit [www.sherrardkuzz.com](http://www.sherrardkuzz.com).*

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# Have you been HACKED?

**MOST COMPANIES WERE BREACHED AT LEAST ONCE**

Average recovery cost for those attacked more than once per day exceeds \$3.7 million.

Canadian companies are cyber attacked in varying degrees of severity more than 450 times per year, with 87% suffering at least one successful breach, says a Scalar Decisions cybersecurity study.

The Toronto-based IT security provider said the survey of 420 Canadian IT and security workers conducted by IDC Canada also showed almost half (46%) of the respondents are not confident in their ability to defend against attacks.

“Many companies are still reporting gaps in their defences despite hiring full-time security staff, which may point to a deficit in the availability of highly skilled IT workers,” said Theo Van Wyk, Scalar’s chief security architect. “The rising number of high-impact breaches coincides with the increasing costs of recovery.”

The study found:

- Of the companies that suffered a security breach, 47% had sensitive data stolen.
- One-in-five breaches was classified as “high-impact” where sensitive customer or employee information was exposed.
- The average company spends \$3.7 million in direct and indirect costs to recover from security breaches.
- One-fifth of smaller organizations believe they don’t have enough resources to effectively defend against attacks.

- Firms dedicate about 10% of their IT budgets to security spending.
- Most respondents do not train employees to identify attacks, such as phishing scams, or update software with the latest security measures.
- Almost three-quarters of respondents don’t comprehensively analyze how third-party relationships affect their overall cybersecurity planning.

All responses were captured in November and December by IDC Canada through a Canada-wide cross-industry survey. Respondents came from a variety of industries, with more than half representing companies with 250 to 4,999 employees.

Download the study at [www.scalar.ca](http://www.scalar.ca).

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# The pressure IS ON!

## BDC PREDICTS HIGHER PAY INCREASES IN 2018



The CFIB expects wages to rise 3% or more this year.

PHOTO: FOTOLIA

Manufacturers should prepare as factors driving growth come into play.

**W**ith law of supply and demand about to exert itself, manufacturers should prepare for higher wage increases this year, warns the Business Development Bank of Canada (BDC) in its monthly economic letter.

Manufacturing is one of several sectors with the strongest demand for labour.

The Crown Corp. entrepreneurs' bank, citing a Canadian Federation of Independent Businesses survey, said 60% of small business owners have consistently reported shortages of skilled and low or unskilled workers are limiting production and sales.

As of the third quarter last year, unfilled advertised jobs across the board reached 468,000.

Several factors are having an impact on increasing job vacancies, skills availability and wage growth.

Baby boomers are retiring but the replacement generations are smaller, creating a gap. Nonetheless, wage growth has been slow for several years. Technology and globalization is one reason, as many middle-skilled people moved into lower skilled jobs in the services industry.

### Change is coming

Slow productivity growth also hinders wage growth. Canada has averaged just 0.4% since 2011, far below the 3.2% of the 1960s and the 1% to 2% from 1970 to 2010, according to analysis by financial services firm Desjardins.

And labour's share of GDP has declined significantly from 61% in 1991 to 56% in 2013, which is similar to trends in other developed countries, according to the International Labour Organization.

However BDC says change is coming this year as an improving economy steadily reduces the number of underutilized workers (part-timers who want full-time work).

More than 90% of the jobs created last year were full-time. This year BDC expects the absorption of labour market slack and retiring baby-boomers will outweigh the structural changes that have slowed wage growth.

CFIB forecasts about 40% of businesses expect to raise wages by 3% or more this year, with most raising pay by 5% or more.

Increases in minimum wages (notably Ontario, Alberta and Quebec) will add to the upward pressure, and the Bank of Canada is anticipating wage increases for 11% of workers.

Regionally, Quebec, BC and Ontario, with the strongest demand and the smallest working age populations, will experience the most intense pressure for higher pay.

What does it mean for manufacturers? BDC offers the following advice:

- Be ready to raise wages and offer more benefits to employees, especially when you are operating in a sector where talent is in demand.
- Invest in technology and training to enhance the labour productivity of your workers to ensure your workforce stays competitive.
- Understand the demographics for your available labour pool to anticipate changes in wages in your industry. Check out Statistics Canada's Age Pyramid comparison tool for your metropolitan area.

Read what other entrepreneurs are doing to manage in this challenging labour market in BDC's report: *Future-proof your business – Adapting to technology and demographic trends* at [www.bdc.ca](http://www.bdc.ca).

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## DIGITAL TECH

Digital manufacturing is disrupting entire industry sectors, so be prepared to move quickly.

BY MARY ANN YULE

If you continue to see 3D manufacturing as theoretical, think again. It has been used to print everything from organs to custom footwear, and NASA even made a rocket engine injector from a 3D printer. However, most manufacturers haven't looked at how they'll incorporate digital manufacturing, much less begin to adopt it.

The push for personalized products, democratized innovation, rapid urbanization, changing demographics and sustainability are big trends that are changing our world, and the way work happens will dramatically change along with them. 3D manufacturing can help businesses navigate these trends by reducing time-to-market, improving inventory management, lowering logistics costs and increasing flexibility to meeting customer needs.

Recognizing its enormous potential, many public-private collaborations across Canada encourage 3D printing adoption in industries such as aerospace, automotive, consumer packaged goods, telecommunications and healthcare. This, along with the most recent **PLANT Manufacturers' Outlook** report, sets digital manufacturing as a primary area for investment.

As you consider 3D manufacturing, keep these factors in mind:

**Define a clear vision for 3D manufacturing.** Is your company striving for efficiency, growth or both? Prioritize the potential benefits, such as faster time-to-market, reducing waste, moving the supply chain or charging a premium price for customized products. Inventory your processes and assess where digital manufacturing will replace methods, improve processes and complement existing practices.



3D printing has been adopted across a number of industrial sectors. PHOTO: FOTOLIA

# Manufacturing in 3D IT'S CHANGING THE RULES AND HOW YOU COMPETE

Build a clear path for adoption, including how ancillary functions will adjust and support it.

**Broaden your competitive landscape.** 3D manufacturing smashes industry entry barriers and creates opportunities for new businesses. Even the smallest businesses can reach tens of millions of potential customers by sending files to deliver a product anywhere in the world where there's a 3D print shop. How will this transform what your competition looks like?

**Reassess your supply chain.** The supply chain will become more localized as manufacturing becomes available at the country level, negating the need to buy goods from other countries. This will create a more efficient supply chain, improve delivery and protect margins. Leapfrogging is important – think about the impact of mobile phones in developing countries. They skipped landlines and moved ahead to improved, more accessible technologies. What are the implications for your supply chain?

**Create a ready workforce.**

3D manufacturing will render some jobs obsolete, but new jobs will spring up, such as digital analysts, virtual reality architects and visual data scientists. Consider that 65% of children entering primary school today will ultimately end up working in completely new job types that don't yet exist, according to the World Economic Forum. And it's not just manual jobs that are being automated, but also high-skill cognitive jobs. People with the right skills will be in short supply.

**Protect your IP.** A 3D printed product is designed using computer-aided drafting (CAD) software, which produces files that may contain proprietary information. The loss or theft of files could be disastrous for companies, potentially leading to digital sabotage or design theft.

For example, consider a cloud data breach of a medical device company where a hacker penetrates a remote site's firewalls and steals technical design files. Cheaper look-alike products are then released to the market.

As a result, the medical device company sues the cloud data provider, the manufacturer and the 3D printer maker.

Software and hardware companies will need to invest in helping designers and manufacturers encrypt their data and ensure complete control of how it's used.

**Keep on top of evolving trade and tax requirements.** 3D manufacturing advances the borderless society allowing corporations to make things anywhere in the world. The ramifications for international trade will be significant. Canadian manufacturers will need to ensure legal teams keep on top of changing rules and regulations.

Digital manufacturing is one of the most disruptive technologies of our time. Even if you aren't printing rocket engines, you should be looking at outmanoeuvring your competition by preparing for and incorporating 3D manufacturing.

This is an industry that moves quickly. Preparing now will provide the best chance of success tomorrow.

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*Mary Ann Yule is the president and CEO of HP Canada Co., based in Mississauga, Ont. Hewlett-Packard is a technology company that makes a range of computing and printing products, including 3D printers.*

**Comments?**  
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Workplace violence includes verbal abuse.

PHOTO: FOTOLIA

# Harassment in the WORKPLACE

## DEFINE IT AND BE PREPARED TO ACT

Recognizing and reporting it is a step toward prevention.

It's Sunday night. Maia is dreading her Monday morning and a supervisor who makes a habit of intimidating and humiliating her in front of her co-workers.

This type of harassment plays out for many workers and often goes unreported.

Workplace violence suggests physical abuse such as hitting, shoving, kicking and threatening behaviour such as shaking fists and breaking or throwing objects. But it's also arguments, property damage, vandalism, theft, psychological trauma and anger-related incidents, or at an extreme end, even rape, arson and murder.

However, violence includes less obvious, but equally destructive, behaviours such as verbal or written threats, rumours, pranks, swearing, insults or condescending language intended to cause harm.

According to the Canadian In-

itiative on Workplace Violence, one in five violent incidents (including physical assault, sexual assault and robbery) occurs in the workplace. And violence isn't limited to the workplace. It happens offsite at work functions such as conferences, training, tradeshow and social events.

A 2014 Queen's University poll found that 23% of Canadians have experienced workplace harassment.

It occurs when someone makes unwelcome remarks or jokes based on race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, family status, disability, or pardoned conviction.

Sexual harassment is any conduct, comment, gesture or contact of a sexual nature likely to cause offence or humiliation or might be perceived as placing a condition of a sexual nature on employment, or any opportunity for training or promotion.

Results from a 2014 Angus Reid survey on sexual har-

assment revealed three in 10 Canadians said they had been sexually harassed at work, but very few reported it to employers because most "preferred to deal with it on their own."

Other reasons for not reporting included embarrassment, not sure it was harassment, fear it would hurt their career, and the feeling that the issue was too minor.

Three-quarters of respondents said the issue is important and should get more attention. The same percentage said it's widespread, or at least a common occurrence.

### Ramifications of abuse

The human and financial costs of abuse are great. Employees can be affected physically and psychologically. Common responses range from low morale and productivity, changes in eating and sleeping patterns, denial, panic

and anxiety, depression, fear, post-traumatic stress disorder (PTSD) and thoughts of suicide.

Manufacturers are also affected. Decreased productivity, low morale, increased absenteeism and healthcare costs, and potential legal expenses result when companies don't take steps to prevent harassment and violence. But it's an employer's legal duty to do so.

Many provincial occupational health and safety acts include harm to psychological well being in the definition.

Managers must not tolerate any violent behaviour including aggression, harassment or threats of violence.

Commitment from management is key to any workplace violence prevention program. This commitment is best communicated in a written policy that includes a system in which employees report abuse.

Learning to recognize workplace violence for what it is, is an important first step.

*This article was contributed by the Hamilton-based Canadian Centre for Occupational Health and Safety (CCOHS). It provides information, training, education, management systems and solutions that support health and safety programs and the prevention of injury and illness in the workplace. Visit [www.ccohs.ca](http://www.ccohs.ca).*

### Comments?

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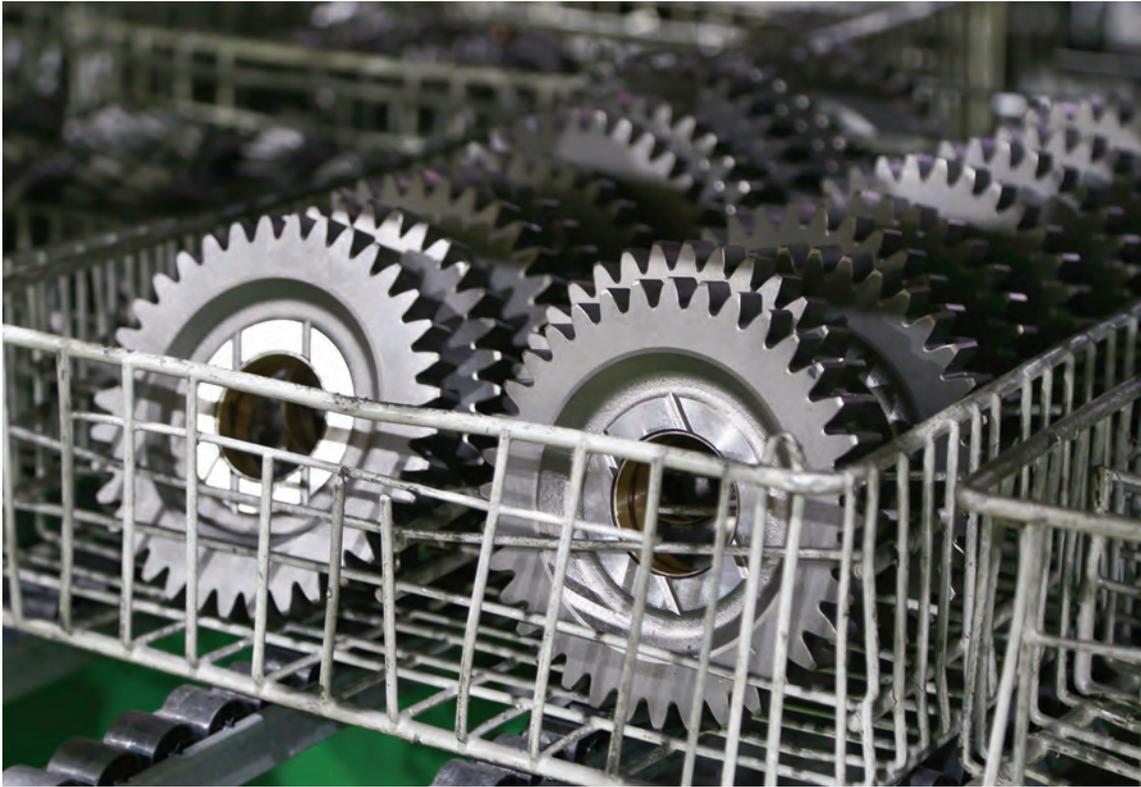
## Protecting employees

Most Canadian jurisdictions have a general duty provision in their occupational health and safety legislation requiring employers to take all reasonable precautions to protect employees.

They include Alberta, BC, Saskatchewan, Manitoba, Ontario, Nova Scotia, Newfoundland and Labrador and PEI, as well as Canadian federally regulated workplaces. Quebec has legislation regarding "psychological harassment", which may include forms of workplace violence.

Many jurisdictions have working alone regulations, which may have some implications for workplace violence prevention. Ontario also has specific harassment legislation.

More information is available in the OSH Answers fact sheet OH&S Legislation – Due Diligence at [www.ccohs.ca](http://www.ccohs.ca). This provision includes protecting employees from a known risk of workplace violence.



Overstocking spare parts can be as much of a problem as understocking.

PHOTO: FOLOLIA

Protect your plant's ability to deliver output and services.

BY STEVE GAHBAUER

Of all the issues that cause the most headaches, one that stands out is how to best handle spare parts. Should maintenance hold spares in stock – and if so, how many; spend money on spares up front; or wait until they're needed?

Here are some hard facts about spares:

- Sporadic needs are difficult to anticipate.
- Long lead times can be created by stock-outs between deliveries.
- Multiple storage locations increase the complexity of inventory management.
- Stocking decisions have a significant impact on working capital.

So how do you find a way to balance the cost of purchasing and storing the right spares as they're available in the right place at the right time?

Not to worry! Building a best-in-class management system can

# Managing SPARES

## HOW TO BALANCE COST AND AVAILABILITY

be done in four steps, according to Ned Meyer, principal of Xtivity Inc., an MRO inventory management advisory company. He suggests: establishing a baseline; identifying priorities; developing a business case for change; and planning, then implementing.

To start with, divide spares into critical and non-critical.

Next consider the cost of holding critical spares. There are two aspects: the cost of purchase and shipping of the spares, and the cost of keeping (and possibly maintaining) them on the shelf. This includes a space cost allocation plus administrative costs plus possible deterioration costs if there is

loss of functionality. Mostly this is calculated as a percentage of the purchase price.

Also look at the risk of not having a spare in stock when it's needed. Risk is the probability of failure times the cost of failure. For spares, risk is defined as the cost of not holding a spare times the probability of needing it.

The cost of purchase in an emergency buy will be higher because it leaves little or no chance for price negotiations or inclusion in a bulk buy. Expediting costs will depend on size, the travel distance and the urgency of specified delivery modes. The cost of an extended outage represents the extra time required to complete

the outage, given the delay in acquiring the spare.

The cost of downtime during an extended outage is loss of revenue or loss of profit. It begs the question: what's the probability that the remaining useful life (RUL) of a spare is intact, given that a potential failure has occurred? If the spare is past its RUL and a new one has to be ordered, will the equipment last until the new part comes in?

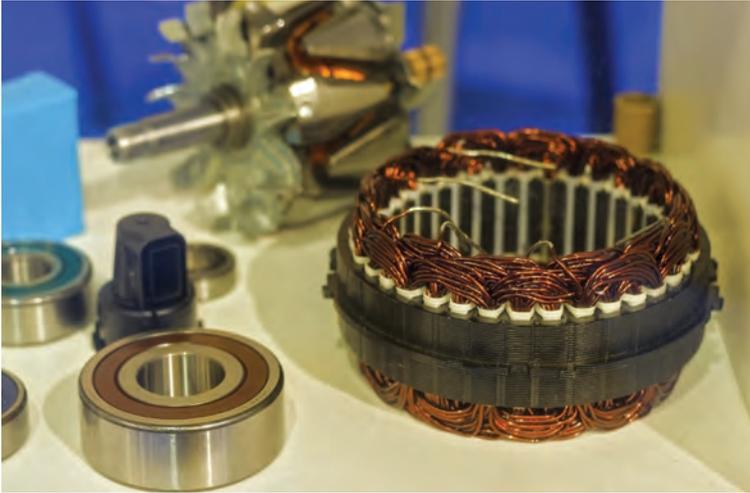
### Predicting failure

Many manufacturers try to predict when the next failure of a spare part will occur. After all, that's what predictive maintenance programs should be all about. Typically, the logical time frame for prediction is until the end of the current operating cycle (will it keep running until it is taken down for maintenance?). This has to be adjusted to account for the normal delivery time if it's not in the inventory.

According to Ben Stevens, the principal of DataTrak Systems Inc., a specialist in CMMS and EAMs in Godfrey, Ont., the key elements that shape the RUL prediction are:

- the current condition of the spare part RUL (the amount of degradation that the spare has suffered, compared to its functional failure level);
- the history of previous degradations, particularly how quickly they occurred;
- the expectation of the equipment's failure; and
- anticipated use of the equipment and spare for the balance of the current operating cycle.

If the plant moves to a double-shift or places a greater load or stress on the equipment, the probability of failure increases. RCM thinking pays attention to the practicalities of functional failure and the related inventory of spares. Stevens reminds us that most of the RCM texts touch on potential failure, but almost all ignore the immense value derived from their smart use. He says potential failure is best defined as recognizing degradation that's within



Spare parts for repair of an electric motor.

PHOTO: FOLOLIA

normal operating specifications but, if unchecked, will lead to a functional failure. Potential failure is the trigger point for a specific maintenance action to avoid functional failure – and it's prudent to have the necessary spare parts in stock.

That's fine if we can measure degradation. However, electrical and electronic spares rarely provide advanced warning of failures. Critical spares must be kept in stock for fast replacement when the in-place item fails.

In his essays about spare parts issues, Stevens says: "I have ducked the thorny question of the value of the penalty and reputation costs. This is because it is very speculative, despite typically being the largest of the cost elements. It attracts argument and debates and draws attention away from the real issue."

He suggests appending a list of costs that are easier to find: penalties for failure to supply; extended environmental damage; and potential cost of lost materials.

There are other ways for finding money for spare parts.

"Hidden money is available in the MRO spare parts inventory of most companies. It's not difficult to identify that inventory, but to fully take advantage of this savings potential, one must understand how it got there, how to avoid it rebuilding itself, and what the nine phases of the

MRO lifecycle are," says Meyer in a presentation he delivered at a MainTrain maintenance conference, convened by the Plant Engineering and Maintenance Association of Canada. He lists them as:

1. Initial provisioning of materials
2. Data standardization
3. Inventory optimization (which improves productivity, reduces maintenance inventory value, and provides accurate lead time information for restocking)
4. Leveraging through spend analytics
5. Making up a bill of material
6. MRO centralization and exchange (savings and effi-

ciencies exist when parts can be redistributed throughout the company: a plant gains leverage when it has the ability to analyze item data at every location)

7. Dispositioning (identify obsolete items, items no longer associated with operating equipment)
8. MRO best practices (spending hours to locate or acquire spares is a huge waste of time)
9. Sustainability through training, learning and videos

An MRO lifecycle strategy should be self-funding. Improvement initiatives usually are, because savings are realized faster than expenses.

There is one more area of importance – the proper storage of entire motors. Motor spares are an investment in space and vital to preventing production downtime. If properly stored, spare motors are as reliable as an original.

But one must ensure motors are stored in an area with a temperature above the dew point. If motors are exposed to dew point issues, install space heaters. This will ensure bearing components and the shaft don't rust, and prevents damage to the insulation system. Shafts and bearings must be rotated pe-

riodically, preferably quarterly, to reduce false brinelling. Place a two-colour tag on the motors, with one colour facing out for one quarter and the other for the alternate quarter. Turn the shaft, and then turn the card. Machined surfaces, including the shaft, should have a coating of masking grease or oil.

It's also important to store spare motors in an area with low or no vibration from truck movement, heavy equipment or operating machinery. Periodic insulation resistance or MCA tests should be performed to monitor degradation.

Properly managing spares is a balancing act. Being aware of the costs and paying attention to details will deliver significant savings without losing the benefits of a well-run spares inventory.

*This article includes information from DataTrak Systems Inc., Asset Management Solutions, MotorDoc LLC and MRO-Connection. Steve Gahbauer is an engineer, a Toronto-based business writer and a regular contributing editor. E-mail gahbauer@rogers.com.*

**Comments?**  
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## TECH TIP

### Belt-driven motors

#### Check for soft foot during installation

Check for soft foot condition when installing a belt-driven motor system. Although soft foot has little impact on the ability to align or tension the belts, it will cause the base and motor to twist, putting high tension on the frame and causing a variation in the motor airgap. The result is reduced mechanical component, including bearing life, reduced system efficiency due to increased friction losses, and vibration.

Try to rock the motor on the base. Add shim, as required, to prevent rocking. Tighten down all mounting bolts. Place a dial indicator on the base and the tip on one of the motor feet. Loosen that bolt and observe the dial indicator reading. If it's greater than 0.001 inches, add (or subtract) shim. Repeat for each foot.

To properly evaluate worn belts and sheaves, or other defects (cracks, over-tensioned, under-tensioned), you



Soft foot can cause the base and motor to twist. PHOTO: FOTOLIA

need the diameters of the sheaves and the centre-to-centre distance between them. It doesn't matter whether the measurements are in metric or imperial, as long as they are consistent.

Source: With permission, MotorDoc Newsletter ([www.motordoc.org](http://www.motordoc.org))

## THINK LEAN

Workers immersed in a process look for potential improvements.

BY RICHARD KUNST

**T**raining at a prominent mature lean organization provided some key learning about emotional attachment. No matter what the function may be, it was everyone's responsibility to identify at least 26 improvement ideas annually that would allow the company to remain competitive. This requirement was written into every position description.

Instilled in every team member was the ability to observe process while identifying wastes and improvements. And no one was walked out the door for making his or her job obsolete. They were more likely to earn greater responsibility.

Lean practitioners like to use checklists, the most powerful being the TPM. It started as total predictive maintenance, which involved a team member performing equipment self checks to detect potential problems early, but evolved into total productive maintenance. In addition to self-checks, it authorized the team member to perform basic maintenance tasks and adjustments such as lubrication of machinery.

Today TPM incorporates several checklists into a comprehensive one that covers equipment checks, plus area housekeeping requirements, proper stocking levels of supplies, quality and safety. And having the team member conduct the checks helps create an emotional attachment to the process. If unscheduled downtime occurs, you can work with the team member to identify additional checks that detect potential issues earlier. To increase the level of attachment, have tasks completed at the start, during and end of shift. Start of shift tasks ensure the operating environment is safe and predictable.



TPM forms a great base for training on how to perform checks.

PHOTO: FOTOLIA

# Emotional ATTACHMENT

## IT CREATES EMPLOYEE ENGAGEMENT

TPM also forms the base for a great training program and is the pre-cursor to formulating and documenting standard work.

### Foundation for training

As for leaders, they want to do a great job of leading. In many cases this means walking the process and speaking and engaging with the team to discuss progress and address concerns. Typically this is done at the top of the day before regularly scheduled meetings begin, but it can be counter-productive, especially if several leaders walk the floor at different times. Studies have revealed that once you interrupt someone performing a task, it can take up to 21 minutes for him/her to get back into the zone.

A good way to know if a process is operating within tolerance is to use an hourly run board, but make it big enough to be visible from at least 15 metres away.

People are naturally competitive. When presented with aggressive but achievable objectives they'll do their best to accomplish the tasks. If you set hourly performance targets, team members will do their best to meet them. If they fail to do so, it's an opportunity to offer coaching or problem resolution. This can be accomplished while being an observer and without interrupting the team member.

As team members work and document progress on their hourly run board, hopefully they're considering improvements.

Employee engagement is best observed by having each member of the team do a daily reflection using the daily report-out. It relies on the use of precision speaking and generous listening. Typically, team members answer to: What worked well? ... so we keep doing it; What didn't work well? ... so we stop or

change that activity; and, What to do differently?

Finally you need to invest in creating a professional environment for your team members so they're proud of your brand.

A mentor once noted there are hundreds of books on how to golf and even if you read all of them, you won't necessarily become a great golfer. Developing golf muscle memory requires a lot of training, but it helps to have some colleagues along as observers who can provide feedback for improvement.

---

*Richard Kunst is president and CEO of Cambridge, Ont.-based Kunst Solutions Corp., which helps companies become more agile, develop evolutionary management and implement lean solutions. Visit [www.kunst-solutions.com](http://www.kunst-solutions.com). E-mail [rkunst@kunstofsolutions.com](mailto:rkunst@kunstofsolutions.com).*

**Comments?**  
**E-mail [jterrett@plant.ca](mailto:jterrett@plant.ca).**



Sustainable practices are good for business.

PHOTO: FOLLOIA

# Going GREEN

## A PATH TO GROWTH AND PROFITABILITY

A global HSBC study finds 25% of smaller Canadian companies are prioritizing investment.

Are sustainable practices good for business? Ask a senior exec and the answer will likely be a politically correct 'yes', but that doesn't mean implementing those practices are an investment priority.

HSBC, the global financial services company, surveyed 1,400 decision-makers at companies around the world with between 200 and 2,000 employees across several sectors. It found 59% believe sustainability would improve growth and profitability. Manufacturers (74%) are most likely to recognize the value and 30% of companies say becoming a more sustainable business will contribute to improving financial performance over the next three years.

Smaller Canadian firms (66%) are ahead of the global average, but only 25% are prioritizing investment to become a sustainable business compared to the leaders, which include Saudi Arabia (34%), Hong Kong (33%) and Australia (33%). The US weighs in at 28%.

By sector, mining (36%), professional services (34%) and utilities (33%) show the greatest commitment to investment. Manufacturing isn't too far off with 29% of respondents showing commitment.

HSBC reports just 18% of smaller firms rated sustainable practices as important to their business today, but 46% see

them as important in the next three years. And setting up a dedicated team to handle corporate social responsibility initiatives has gained importance.

HSBC recommends businesses seek operational efficiencies in their supply chains to improve sustainability. For example, if raw materials travel shorter distances, emissions and costs are reduced. Almost half (47%) of leaders identify this as a contributor to financial performance over the next three years.

### Improve performance

Other practical steps include:

- Adapting to customers' changing preferences. They may respond well to products sourced and produced in a sustainable way, which could boost revenues.
- Investing in renewable energy sources such as wind and solar.
- Introducing and enforcing codes of conduct and policies on issues such as human rights and relationships with local communities.
- Reporting on environmental, social and governance performance. Transparency can be an important first step in winning the trust of consumers and investors.

The HSBC 2017 survey polled executives of companies in Australia, Canada, China, France, Germany, Hong Kong, India, Indonesia, Mexico, Saudi Arabia, Singapore, the UAE, the UK and the US.

**Comments?**

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## FOOD PROCESSING



Use low-impact pesticides in targeted locations.

PHOTO: FOTOLIA

# A plan for controlling PESTS

## FIVE STEPS TO GREENER INTEGRATED MANAGEMENT

IPM emphasizes biological, mechanical and cultural controls.

BY ALICE SINIA

Research has provided many innovations that help us reduce our impact on the environment, and those efforts extend to pest management. Pesticides may be one of the first things that come to mind, but the best practice for eliminating pests in food manufacturing facilities is an ecological approach based on the principles of integrated pest management (IPM).

When you know where pests live and how they behave, you

can take proactive steps to keep them out of your facility and eliminate the conditions that attract them.

Follow these five steps for greener pest management:

**1 Measure pest activity.** Thoroughly inspect the facility. Know which pests impact the facility and define action thresholds. They'll help reduce and focus pesticide use. Thresholds vary for different areas of your property. For example, four flies just inside the main entrance may be acceptable because they aren't a risk to food products, but the same number of flies in a food processing room calls for immediate control and preven-

tive actions because they're a contamination risk.

**2 Be proactive.** Implement habitat modification, exclusion, maintenance and sanitation strategies that keep pests away. Maintenance and janitorial staff will alert you to signs of activity while helping to eliminate the sources of food, water and shelter pests need to survive. Hold regular IPM training sessions and incorporate these tasks into daily staff routines:

- Caulk gaps, cracks and crevices to close entry points.
- Maintain door and window seals and screens, as well as door sweeps.
- Clean up product spills and fix water leaks to remove sources of food and water.
- Keep exterior doors closed as much as possible.
- Remove trash daily and regularly wash trash bins to eliminate debris.
- Clean hard to reach areas to remove buildup that attracts pests.
- Unload shipments in a designated area to avoid spreading

## SUPPLY LINES

### BALDOR HARMONIZED

Baldor Electric Co., the Fort Smith, Ark. manufacturer of motors founded in 1920, has been completely absorbed by ABB, the global industrial technology company.

Baldor will henceforth be known as ABB. This is part of the Swiss-based company's Next Level strategy, which includes harmonizing different brands under the global ABB master brand.

Baldor, part of the ABB group for more than seven years, will continue to manufacture and market Baldor-Reliance motors and Dodge mechanical power transmission products from 15 US manufacturing locations.

ABB's Canadian headquarters is in Montreal.

### ALTIVAR INTEGRATOR

Cybernetic Control Systems is now a Schneider Electric certified drives panel builder for BC.

The supplier of automation equipment based in Langley, BC will integrate Altivar drive systems, providing design, manufacturing and commissioning services.

Schneider Electric is a global supplier of power management and automation systems.

### SOARING PT SALES

The Power Transmission Distributors Association (PTDA) reports soaring power transmission and motion control sales for 2017's third quarter.

The association's sales history and outlook report shows sales were up 4.2% from a year ago.

Its Q4 Business Index declined to 60.1 compared to the Q2 reading of 65.1; and its Q4 Manufacturer Index declined to 60.6 from 64 in Q3, signalling slowing growth.

Distributors also indicated a decline with a 59.4 reading in the fourth quarter versus a 66.5 reading in the third.

pests from a contaminated product.

- Remove clutter that harbours pests, such as wooden pallets and cardboard.
- Make it harder for pests to access food items by storing them off the ground.

### 3 Maintain detailed documentation.

Records of both preventive and corrective actions help track the effectiveness of an IPM program, identify trends and drive continuous improvement. Create a system for employees to report pest activity. After each visit, review the service report provided by a specialist to ensure recommendations are implemented.

### 4 Monitor hot spots.

Some areas of your facility are more prone to pest activity than others. Continuously monitor these areas to catch activity before an infestation occurs. Monitor your facility by employing methods such as visual inspections, non-toxic glue boards, pheromone traps and light traps. Common hot spots include employee break rooms, garbage and recycling areas, equipment storage areas, wall voids, voids in machinery and food storage areas.

### 5 Use green treatments, when necessary.

Pesticide treatments should be a last resort. Implement mechanical and cultural controls first. If they don't work, use low-impact pesticides strategically and target specific locations.

Plants without an IPM program will be on the defensive. Adopting a green pest management program reduces the environmental impact and benefits the bottom line.

*Alice Sinia is the quality assurance manager – regulatory/lab services, for pest management firm Orkin Canada. E-mail Alice Sinia at [asinia@orkincanada.com](mailto:asinia@orkincanada.com). Visit [www.orkincanada.com](http://www.orkincanada.com).*

**Comments?**

**E-mail [jterrett@plant.ca](mailto:jterrett@plant.ca).**

# LEADING EDGE

Innovative ideas for plants

## WEARABLE MONITOR PROTECTS WORKERS

### Watches for exposure to gas, radiation and dust

A wearable gas detector that integrates with Honeywell Process Solution's plant control system protects workers and speeds up emergency response.

Personal Gas Safety, part of Honeywell Connected Plant and tightly integrated with Honeywell's Experion Process Knowledge System (PKS), monitors gas, radiation and dust. Harmful exposures, man-down or worker panic alarms in the field trigger accurate, automated alarms in real time. Safety teams then apply powerful tools embedded in Experion PKS to provide detailed trending, reporting and data analysis to further ensure safe operations.

The detectors are equipped with a panic button for emergencies as well as a sensor for automatic man-down alerts. Critical alarms from detectors are displayed on control room monitors, showing the location and exposure status of personnel to activate faster and more coordinated response by operators.

Personal Gas Safety can be tailored to specific work environments and risks through customized alerts and notifications by e-mail or text. The solution also helps users identify hazardous areas and isolated gas leaks, enhance industrial hygiene analysis and predictions, and improve post-incident evaluation.

Honeywell Process Solutions is a supplier of automation control, instrumentation and services based in Houston.

**[www.honeywellprocess.com](http://www.honeywellprocess.com)**



*Panic button and man-down alert.*

PHOTO: HONEYWELL

## A SPEC FOR OPC UA

### Easy plant data exchange

Bedrock Automation has published a concise, easy-to-deploy interface specification to take advantage of the security capabilities of OPC UA communications software.

Developers can upgrade any OPC UA compliant client into a highly secure OPC UA channel allowing users to exchange data between plant floor operations and SCADA applications.

SCADA software developers Inductive Automation, ICONICS and TATSOFT are supporting the Bedrock interface specification.

Bedrock, based in San Jose, Calif., makes an automation platform.

**<https://bedrockautomation.com>**

## SINAMICS ADDS S-1FG1

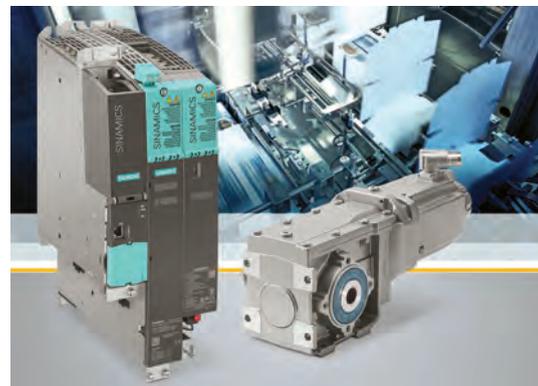
### Expands motion control applications

Siemens Canada has expanded its servo drive portfolio. Sinamics S-1FG1 servo geared motors fit into the Sinamics S120 drive system for demanding motion control applications such as printing and packaging, storage and retrieval, material handling conveyor systems and dosing pumps.

The units have electronic rating plates and the motors are connected via the Drive-Cliq system interface to bring the system online quickly.

Engineering includes high efficiency and low torsional backlash in helical, parallel shaft, bevel and helical worm gearbox versions with up to 25 transmission ratios.

**[www.siemens.ca](http://www.siemens.ca)**



*Siemotics S-1FG1 servo geared motor.*

PHOTO: SIEMENS



The Snap e-car showcased at CES in Las Vegas in January.

PHOTO: RINSPEED

### E-DRIVING IS A SNAP

#### Harting provides charging tech

A must for driver acceptance of electric cars is fast charging.

The Snap e-car concept from Swiss automotive manufacturer Rinspeed AG relies on innovative charging technology from Harting, a global supplier of industrial connectivity products. This includes mode 2 charging cables, mode 3 charging cables and DC rapid charging plugs.

The Snap project is the third collaboration between Rinspeed and Harting.

Last year, the miniMICA acted as a scalable and flexible electronic architecture in the Oasis concept vehicle. In 2016, the MICA was installed in Rinspeed's Etos vehicle for independent emission and condition monitoring.

[www.harting.ca](http://www.harting.ca)

### LEARN INDUSTRY 4.0 SKILLS

#### Festo launches program at Humber College

Festo Canada, a founding technology partner in the new advanced manufacturing supercluster – Next Generation Manufacturing/NGM Canada – is partnering with Canadian technical and training institutes through Festo Didactic.

The German technology company with Canadian offices based in Mississauga, Ont. recently announced a five-year workforce development program hosted by Humber College in Toronto. Festo's Cyber Physical factory will provide students and employees of advanced manufacturing companies hands-on training to learn Industry 4.0 skills while engaging in industrial simulations using advanced manufacturing concepts.

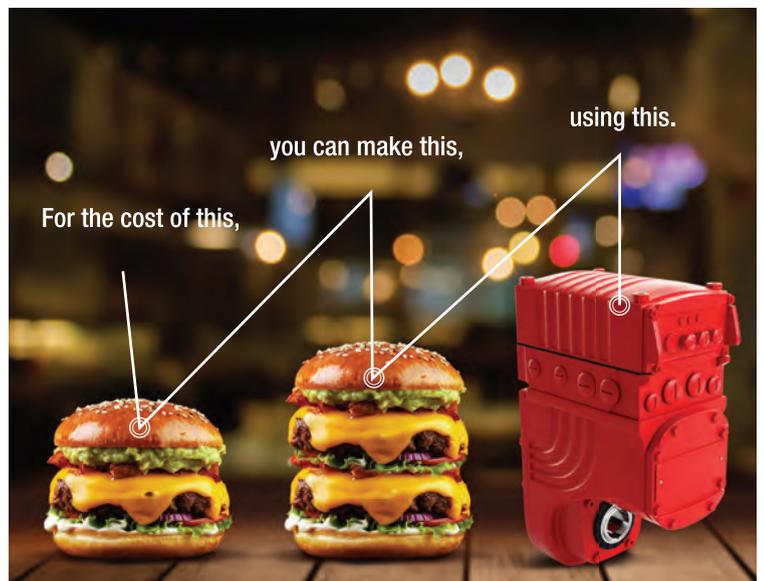
[www.festo.ca](http://www.festo.ca)



Festo's CP factory, destined for Humber College in Toronto.

PHOTO: FESTO

[www.plant.ca](http://www.plant.ca)



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## PRODUCTS AND EQUIPMENT

### METALWORKING

#### STEEL TURNERS EXTEND TOOL LIFE



Improves surface smoothness.

The advanced Absotech platinum CVD coating on Sumitomo Electric Carbide Inc.'s AC8000P series grades for steel turning extends tool life.

AC8015P delivers twice the crater wear resistance during high-speed, high-efficiency steel cutting compared to conventional grades. AC8025P's surface treatment improves tool surface smoothness, as well as adhesion and chipping resistance during general steel turning. AC8035P reduces tensile residual stress in coating for twice the fracture resistance of standard grades in interrupted steel turning.

The wide range of applications for AC8000P includes ring gears, CVT parts, toolholders, axle ends, bushings, flanges, gears and more. Some chipbreaker suggestions include the EGU, the EGE and the EUX.

Sumitomo Electric Carbide is

a manufacturer of electric wire and optical fibre cables in Mount Prospect, Ill.

[www.sumicarbide.com](http://www.sumicarbide.com)

#### PICKLED STEEL IMPROVES ADHESION



Spray or immersion.

Henkel's Bonderite C-IC 182CO, a phosphoric acid pickle, eliminates rust and oxide scale on laser-cut steel parts to minimize rework and potentially eliminate cleaning processes altogether for lightly soiled substrates.

Eliminating oxidation improves paint adhesion and minimizes chipping. The pickle performs on both hot and cold rolled steel used to manufacture metal enclosures, machinery, heavy equipment, architectural steel components, utility vehicles, trailers and other metal parts.

The cleaner can be used as a conventional pre-treatment spray or on an immersion line, and features biodegradable surfactants that facilitate disposal into waste streams.

Henkel Corp., with Canadian offices in Mississauga, Ont., manufactures adhesives for the global market.

[www.henkel-northamerica.com](http://www.henkel-northamerica.com)

#### BLADE REALIGNS CUTTING FORCE



Eliminates stresses.

Sandvik Coromant has unveiled a new blade for its CoroCut QD parting-off system, which combined with new process methodology improves the tool's stability by realigning the resultant cutting force.

The top face of the insert is placed parallel to the end of the blade, rotating the insert seat 90 degrees counter clockwise. The new blade cuts its way into the work piece with its front end, which roughly aligns the resultant vector of cutting forces with the longitudinal axis of the blade. FEM analysis confirms this eliminates the critical stresses typical to conventional

blades and increases blade stiffness by six times compared with standard designs. This increases feed rates or allows the use of a longer overhang without losing stability.

The blades come in 3-mm and 4-mm widths. Standard length versions part up to 120-mm diameter, as well as an extra-long 4-mm wide blade for parting up to 180-mm diameter.

Sandvik Coromant is a manufacturer of metalworking tools with a sales office in Mississauga, Ont.

[www.sandvik.coromant.com](http://www.sandvik.coromant.com)

### PUMPS

#### PUMPS ARE BUILDING SMART



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realize energy savings of up to 70%.

The pumps also provide access to Armstrong's Pump Manager, a connected performance management service with real-time analytics and alerts.

Armstrong Fluid Technology is a Toronto-based manufacturer of intelligent fluid flow equipment.

<http://armstrongfluidtechnology.com>

## EMISSIONS

### TECH SCRUBS INDUSTRIAL EMISSIONS

Bionomic Industries Inc.'s nitrogen oxide (NOx) control chemistry simplifies wet scrubbing system operations.



*Higher removal efficiency.*

Its low toxicity BIONOX SOLVER will not release flammable and dangerous hydrogen sulphide gas at pH use conditions and its special proprietary formulation of powerful nitrogen dioxide reducing agents improves removal efficiency by 33% with a simple addition to caustic.

Typical applications include: removal of nitrogen dioxide emissions from catalyst calcining and preparation; precious metals dissolving; acid dipping and pickling of metals; silicon wafer and circuit board etching; nitrite and nitrate chemical production; medicinal production; nitric acid storage and purging; and nitrogen dioxide removal.

Bionomic Industries is a supplier of scrubber technologies based in Mahwah, NJ.

[www.bionomicind.com](http://www.bionomicind.com)

### DATALOGUE EMISSIONS IN REAL TIME

The E8500 PLUS emissions analyzer from E Instruments International LLC has real-time data-logging software that allows the operator to view, graph and automatically save data directly to a laptop or tablet for export

and the creation of customized detailed reports.

It has a *Create customized reports.* PID VOC sensor option and has expanded memory for handling up to 2,000 tests.

There's also a new sample conditioning unit for low NOx and



SO2. Features include a remote wireless printer; and internal thermoelectric chiller with automatic condensate removal; electrochemical sensors for O2, CO, NO, NO2, SO2, H2S; NDIR sensors for CO2, CxHy, high CO; and the unit is low NOx and true NOx capable.

E Instruments, based in Langhorne, Pa., is a manufacturer of industrial instrumentation.

[www.E-Inst.com](http://www.E-Inst.com)

## ELECTRICAL

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## PRODUCTS AND EQUIPMENT

tions, including isolation.

Six frame sizes range from 100 to 1,200 A, each with a choice of interrupting capacities at voltages ranging from 240 to 690 VAC, and from 250 to 600 VDC.

Accessories include auxiliary and signal contacts, under-voltage and opening releases, rotary handles and motor actuators.

They're available from ITC Electrical Components, a master distributor of electrical components based in Concord, Ont.

[www.itcproducts.com](http://www.itcproducts.com)

### CONNECTORS

#### WAPS PROTECT PLANT DATA

*Creates virtual networks.*



Mencom's Industrial Wireless Access Points (WAPs) protect sensitive data on manufacturing floors.

They cover wide array of applications and withstand harsh conditions.

State of the art encryption and the ability to create a virtual network among wireless clients integrate easily and intuitively to control communications between clients while imposing restrictions on data and excluding malware.

WAPs are equipped with a powerful 2 x2 MIMO Radio interface supporting IEEE 802.11 a/b/g/n, 2.4 GHz and 5 GHz selectable bands.

A built-in DIN-Rail mount runs in multiple modes such as access point, wireless distribution bridge or access point client operation.

WPS and Wi-Fi direct technology options are also available. These devices are designed to be fully operational between -20 and 60 degrees C.

Mencom makes industrial connectors in Oakwood, Ga.  
[www.mencom.com](http://www.mencom.com)

### MOTORS

#### SMART CONTROLLER IMPROVES MOTOR EFFICIENCY

The Allen-Bradley SMC-50 smart motor controller with internal bypass from Rockwell Automation brings greater operational control over motor starts and stops.



*Minimizes heat build-up*

Soft starters traditionally use solid-state, silicon-controlled rectifiers (SCRs) to control voltage to the motor during start-up, runtime and shutdowns. The reduced torque and current slowly introduces energy to the motor, mitigating electrical and mechanical stress to the application. If these SCRs remain in the circuit once the motor is up to speed, the heat generated by these devices leads to electrical inefficiency.

The SMC-50 offers the option of choosing the proper power structure for an application. A built-in internal bypass shifts from solid-state switches to bypass contactor operations that run over an extended period. Switching to the bypass circuit saves energy and minimizes the build-up of excess heat.

The motor controller accesses several communication modules, including EtherNet/IP and DeviceNet networks. This connectivity, combined with its microprocessor platform, brings energy-monitoring capabilities and protection that make applications easier to troubleshoot and fix.

Rockwell Automation is a provider of industrial automation technology based in Milwaukee.  
[www.rockwellautomation.com](http://www.rockwellautomation.com)

#### MOTORS POWER WATER APPLICATIONS

Marathon Powerwash SXT motors from AutomationDirect handle washdowns in food and beverage processing and other environments.



Single- and three-phase.

The all stainless steel, enclosed motors come in single and three-phase, plus C-face with rigid base (footed)

and footless mounting options.

Jet pump motors are commonly used in commercial and industrial water treatment and processing applications to power centrifugal and hydraulic pumps. Marathon jet pump motors come in single and three-phase, and in TEFC and Open Drip Proof (ODP) designs.

ODP allows air to circulate through the motor windings for cooling, but prevents drops of liquid from getting inside. The increased airflow means lower operating temperatures and increased efficiency compared to TEFC or TENV motors.

AutomationDirect is a distributor of industrial automation products based in Cumming, Ga. [www.automationdirect.com/ac-motors](http://www.automationdirect.com/ac-motors)

## VISION

### KEEP AN EYE ON LABEL QUALITY

Omron Microscan Systems Inc.'s LVS-7510 label inspection system integrates seamlessly into thermal printers used in industrial manufacturing to closely monitor label production.



Print rates up to 254 mm/sec.

It analyzes every label even at print rates reaching 254 mm (10 in.) per second with features such as 1D/2D barcode verification

and validation, blemish detection, data and code matching.

The system analyzes any combination of 1D and 2D codes and verifies them against international standards. The software displays the overall ISO grade on a real-time graph so operators can spot trends in print quality throughout a production run of hundreds of labels.

The graph changes colour as errors arise and warnings such as light stack illumination, audible alarms and printer stop will occur.

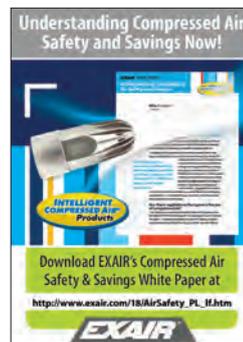
And a blemish feature detects smears, skews, die-cut errors, registration errors and missing information.

Omron Microscan is a supplier of barcode reading, machine vision, and verification technology based in Renton, Wash.

[www.microscan.com](http://www.microscan.com)

## Industrial Literature Review

### COMPRESSED AIR SAFETY AND SAVINGS



Compressed air safety is a concern within manufacturing environments. Learn about the dangers that can come from high pressure and noise exposure. Improper use of compressed air commonly exceeds

OSHA's noise exposure standards and causes noise induced hearing loss. Learn how to be sure you are OSHA compliant. Download EXAIR's latest white paper, "Understanding Compressed Air Safety and Savings."

[www.exair.com/18/AirSafety\\_PL\\_If.htm](http://www.exair.com/18/AirSafety_PL_If.htm)

Exair Corp.

## EVENTS

### Focus on Manufacturing Security Canadian Security (Annex Business Media) April 18, Mississauga, Ont.

One-day event brings together security end users with industry experts, technology manufacturers and service providers. Visit [www.focusonseries.ca](http://www.focusonseries.ca).

### Partners in Prevention Conference 2018 Workplace Safety & Prevention Services May 1-2, Mississauga, Ont.

Keynote speakers, sessions, workshops and professional development courses. Visit [www.PartnersinPreventionConference.com](http://www.PartnersinPreventionConference.com).

### Energy Summit 2018 EMC, NRCAN, CIPEC

### May 30-31, Vaughan, Ont.

The focus is energy efficiency. Experts will help manufacturers maximize profitability, reduce maintenance costs and combat climate change. Visit [www.emccanada.org/group\\_spaces/energy\\_summit/register](http://www.emccanada.org/group_spaces/energy_summit/register).

### PTDA 2018 Canadian Conference Power Transmission Distributors Association June 6-8, Toronto

Education sessions, keynotes and networking. Visit [www.ptda.org](http://www.ptda.org).

### 2018 National Apprenticeship Conference Canadian Apprenticeship Forum June 10-12, Montreal

Initiatives, programs and strategies. Visit <http://caf-fca.org/2018-national-conference>.

## PLANTWARE



East access to metrics.

PHOTO: FOTOLIA

### MANAGING WITH CLOUD ERP

JustFood is leveraging advances in Microsoft's cloud technology to help food manufacturers manage their businesses more efficiently.

The food software provider's JustFood 2018 release connects departments, data and processes into a single cloud ERP with upgraded integrations and add-ons, plus improved reporting capabilities.

New role centres and more intuitive workflows for quality and product recall processes improve operational efficiency; a new API library simplifies integration with third-party applications; and upgraded, built-in reporting puts operations and financial data at your fingertips.

Accessing the metrics is easier with Analytics for JustFood. This robust platform brings all critical metrics into easy-to-use dashboards.

JustFood has a Canadian office in Mississauga, Ont.

[www.justfooderp.com](http://www.justfooderp.com)

### APP ACCESSES PLCs

The WindEDIT Lite app for iOS and Android devices provides two-way access to IDEC Corp.'s family of MicroSmart FC6A PLCs that's quicker, simpler and connects easier than using a browser.

The app monitors any PLC parameter and changes set points. Data register, input, output, timer and counter values are monitored and controlled using the standard Dialog Interface, while a custom feature monitors and controls certain PLC parameters. Trending is supported by the app with plotting of multiple register points for graphical views.

Once the app is downloaded to a smart phone or tablet, it interfaces with MicroSmart FC6A PLC via wireless Bluetooth or Wi-Fi for two-way access.

For security, access to the PLC needs to be configured for each user with correct username and password.

IDEC is a global supplier of industrial automation and control products based in Sunnyvale, Calif.

[www.IDEC.com/usa](http://www.IDEC.com/usa)



# “Progressive” trade agenda leads to regressive results

BY LEE HARDING

If Brett Wilson were still taking business pitches on Dragons’ Den, he would never partner with Canada’s trade negotiators. During a recent television interview, he openly wondered whether the negotiators were “delusional, naïve or stupid.”

He settled on stupid, saying: “Right now, we’re trying to build on this social agenda of respect and dignity and this global perspective which is borderline stupid. ... The environmental agenda or the gender equality agenda or any other agenda that we are putting on the table, [with trade] we’re talking about a business agenda.”

Prime Minister Justin Trudeau is proud to tout Canada’s insistence on injecting social agenda issues into economic negotiations. “Progressive trade is possible,” Trudeau stated, pointing to the recently reshaped Trans-Pacific Partnership. It’s not entirely clear whether “progressive” agendas actually represent progress but it’s even harder to establish that such agendas are promoted in the TPP.

The federal government says the new TPP is socially superior to the former deal, which encompassed 12 nations until the US withdrew a year ago. The agreement includes the protection of cultural industries from competition, similar time frames for generic drugs to appear in the marketplace and no new powers for foreign companies to sue Canada. In other words, Canada managed to save a portion of its existing sovereignty while calling the agreement “progressive.” The final claim includes a “fully enforceable” chapter on labour and the environment. Details are sketchy yet they’re an important concern for industry leaders because they assess deals on financial impacts. Access to the Japanese market will be a boon for Canadian pork, beef, grain and lumber producers. Meanwhile, the auto and steel industries fear increased competition from nations with cheap labour.

“There is nothing remotely progressive about the TPP,” said Unifor president Jerry Dias, who may soon have fewer autoworkers among its 315,000 members. His comments prove that even progressives care more about jobs for workers and money from union dues than such nebulous social goals as gender equity and outrageous environmentalism.

This is not to say Trudeau has no domestic allies. John Manley, a former Liberal cabinet minister who heads the Business Council of Canada, told reporters in Davos, Switzerland, “By saying Canada is part of TPP – without saying so – the prime minister is saying: ‘I am not Donald Trump,’ and

that is a good thing.”

How strange. Through this progressive but non-progressive trade agreement, Canada has said that Trudeau is no Trump. And it’s bizarre to suggest that this is good in terms of trade negotiations given that Trump is in a league of his own when it comes to success at The Art of the Deal.

The Trudeau approach, where values are more important than practicality, seems poised to sink the North American Free Trade Agreement (NAFTA). In January, Canada was compelled to tattle to the World Trade Organization about its greatest trading partner – the US. The complaint listed 200 incidents of anti-dumping and anti-subsidy duties from the US, even though the overwhelming majority of these incidents had nothing to do with Canadian trade.

“Canada’s complaint is bad for Canada,” said US trade representative Robert Lighthizer. “Even if Canada succeeded on these groundless claims, other countries would primarily benefit, not Canada.” In fact, if acted upon, these complaints would lower Canada’s share of American imports of steel, aluminum, lumber and paper. As it is, Lighthizer called the move “a broad and ill-advised attack on the US.”

For his part, Wilson has no intention of attacking the US. In fact, the part owner of the Nashville Predators is ready to invest even more there. Let’s just say that lower taxes and reduced regulations outweigh his uncertainty over the future of NAFTA.

As for Canada’s other big trade negotiation – with China – Wilson sounds as frustrated as a football fan watching his team repeatedly drop the ball. “[In China] they’re building 1,600 ... coal-fired power plants right now, and we’re saying we’re going to reduce greenhouse gases with our carbon tax. And they expect China to respect what we are doing. They don’t care.”

Politically correct values in trade deals can never be the foundation of an economic deal, especially when it involves countries that don’t care about such social policies.

Wilson may be right when he says it’s “delusional, naïve or stupid” to make carbon emissions and gender equality the integral components of such negotiations. When will Canadian trade negotiators understand that?

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*Lee Harding is a research associate at the Frontier Centre for Public Policy, western Canada-based think tank. Visit <https://fcpp.org>. Troy Media © 2018.*

**Comments? E-mail [jterrett@plant.ca](mailto:jterrett@plant.ca).**

“THE TRUDEAU APPROACH, WHERE VALUES ARE MORE IMPORTANT THAN PRACTICALITY, SEEMS POISED TO SINK THE NORTH AMERICAN FREE TRADE AGREEMENT ...”

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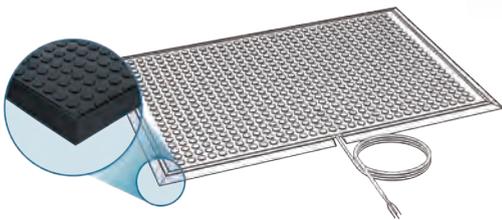
# Safety Mats and Edges

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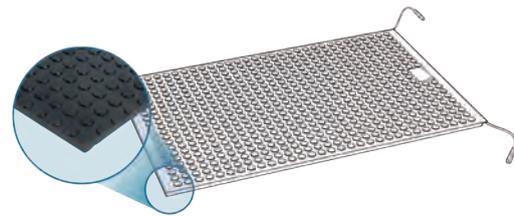
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- Requires aluminum mounting rail (included with 2ft and 5ft edges)



### 25 x 45mm Profile

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- Sections can be easily daisy chained
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