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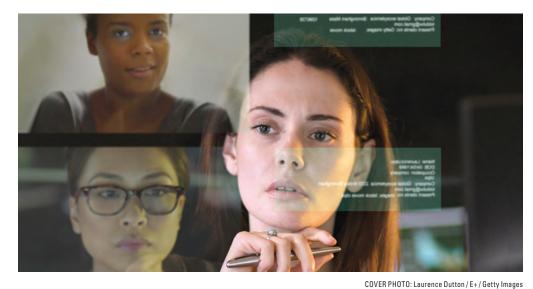






PRINT**ACTION**





7 **COMMUNICATING EFFECTIVELY** Recent events have increased adoption of technology to communicate.



8 GETTING THE LEAD OUT Lithium-ion battery manufacturer growing market for material handling applications.



12 GETTING SERIOUS ABOUT E-COMMERCE? Many businesses have started online selling, and manufacturers are among those looking to get in on the action.



14 MANUFACTURING TEAM ENGAGEMENT Challenges of engagement and communication increased in the early days of the pandemic, as information was coming at people from all directions.



18 STIRRED, BUT NOT SHAKEN Manufacturer thrives making fans and laboratory stirrers despite pandemic chaos.

FEATURES



- 10 ARE YOU REALLY PIVOTING? The current travel restrictions in effect makes in-person physical meetings a distant memory. Yet the
 - meetings a distant memory. Yet, the need for business improvement still exists and is perhaps even amplified.

20 CHECKING-IN ON INVISIBLE WORKPLACE HAZARDS

With regular check-ins and a commitment to worker wellbeing, psychological hazards can be addressed and supported, increasing the health of workers and their general wellbeing.

DEPARTMENTS

- 4 Editorial
- 6 News
- 21 Tech Centre
- 22 Postscript: It Takes All Hands on Deck, Working Together and Across Borders, to Tackle Climate Change

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Embracing change

In a continually evolving world, pivoting is of utmost importance.

ext year, *Plant magazine* will celebrate its 80th anniversary. In a world where a lot of companies come and go, this is an achievement worth celebrating. To that end, a lot of changes are happening at the magazine.

First, this issue of *Plant* is the last to feature the current look. Beginning with the May/June issue, *Plant* will take on a more modern appearance. While the content will be presented in a new way, rest assured that the information contained within *Plant* will not change. However, if there are any subjects that you believe we should cover, please send us a note.

Next, as many of you have noticed, Joe Terret, the editor, and face of *Plant* for many years, has decided to hang up his pen and retire. I would like to take this opportunity to thank Joe for all the hard work he has done on the magazine, and wish him all the best. His are some very big shoes to fill.

Having taken over as editor earlier this year, I have been getting up to speed with anything and everything *Plant* related. As the editor of *Machinery and Equipment (MRO) magazine* and having also worked as an automotive journalist – I am prepared for the role.

Also joining the *Plant* team is Maryam Farag, associate editor. You may have already seen the news and product articles that she has written for *Plant*'s website. We welcome her to the *Plant* team.

Another change for 2021 is the addition of special features for each issue. With March/April being the Growing Your Business issue. On page 8, *Getting the Lead Out* by Andrew Snook focuses on how a lithium-ion battery manufacturer is growing the market for material handling applications.

Richard Kunst's *Are You Really Pivoting?* on page 10 looks at how the needs for business improvement still exist and are amplified as a result of current travel restrictions.

With COVID-19 increasing the amount of purchases people make online, Derek Corrick asks *Getting Serious About E-Commerce? Avoid These Costly Errors* on page 12. He looks at how many businesses have started to sell online, and how this year manufacturers should 'kick-start' the process.

Who would have imagined that we would all be using online communication technology to get all aspects of our work done? As a result, Shawn Casemore looks at *Communicating Effectively When Everyone is Zoomed Out* on page 7.

In this issue we also have our news segment, tech centre, Postscript with Jayson Myers, and a cross-section of manufacturing articles.

Once again, if you have any questions, comments, or suggestions for how to improve *Plant*, do not hesitate to contact me.

One last note, the July/August issue will feature our HR Report and Salary Survey. Be sure to take the survey by going to (www.research.net/r/RD2NHDN).

Stay healthy and stay safe.

Mario Cywinski, Editor Comments? E-mail mcywinski@annexbusinessmedia.com



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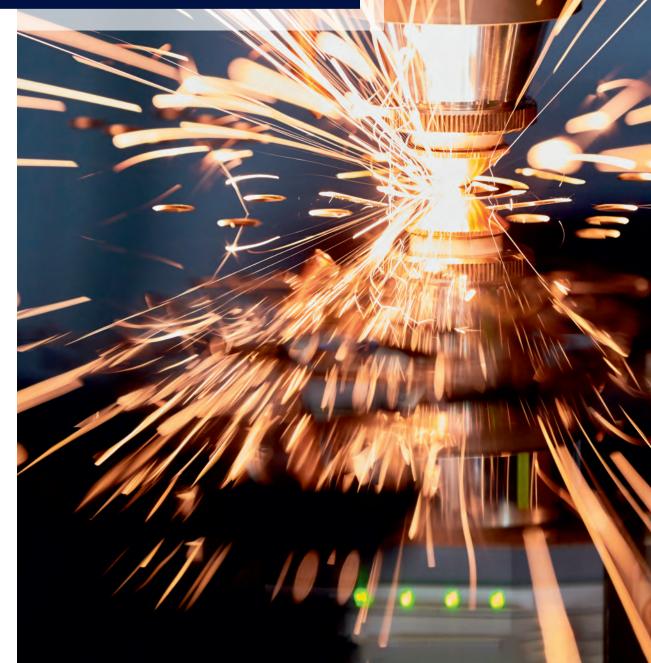


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NEWS



Beckhoff Canada moves headquarters to Cambridge

Beckhoff recently moved its Canadian headquarters to Cambridge, Ont., to increase warehousing and customer support capabilities.

The 11,000-square-feet office offers space for customer training, seminars, sales activities, technical support and an innovation lab for application testing and proof of concepts with the latest Beckhoff technologies, including the XPIa-nar flying motion system and the eXtended transport system.



Manufacturing employment increases, says ADP Research Institute

According to the February ADP Canada National Employment Report, Canadian employment in manufacturing has increased by 2,200 jobs.

Employment in Canada decreased by 100,800 jobs from January to February. The decreased jobs are in the service providing sector, including trade/transportation and utilities, professional/business services, administrative and support, education and healthcare, and leisure and hospitality.

The ADP Research Institute report, which is derived from ADP payroll data, measures the change in total nonfarm payroll employment each month on a seasonally-adjusted basis.

GM's CAMI Assembly gets multiple ENERGY STAR certifications

General Motors' CAMI Assembly recently received Natural Resources Canada's ENERGY Star for Industry Certification, for a third straight year.

GM plans to be carbon neutral by 2040. Energy efficiencies are integrated into GM's business plans, which allows all employees an opportunity to raise energy reducing ideas, contribute to energy saving initiatives, and deploying projects with a focus on reaching company goals.

Canadian Tire and NuPort Robotics partner with Ontario government

Canadian Tire Corporation and NuPort Robotics Inc. have partnered with the Ontario government to invest \$3 million in undertaking an automated trucking project to test a new technology.

The technology provides a transportation solution for the middle mile; the short-haul shuttle runs that semi-tractor trailers make between distribution centres, warehouses and terminals each day, by enabling next-generation automated trucks that are more fuel-efficient and safer to operate.

The two-year project is backed up by \$1 million from the Ontario government through Ontario's Autonomous Vehicle Innovation Network, and by \$1 million investments from Canadian Tire and NuPort Robotics.

The project will apply artificial intelligence (AI) technology from NuPort Robotics to retrofit two semi-tractor trailers, which will be attended by a driver, with a touchscreen navigation system, and other features such as obstacle and collision avoidance.

Taiga Motors to build new assembly facility

Taiga Motors Inc. announced plans to build a mass-production assembly facility in Shawinigan, Québec. The first phase of construction, scheduled for completion in 2022,



represents an investment to accelerate the mass production of Taiga electric snowmobiles and personal watercrafts, and Taiga's side-by-side vehicles, which are expected to be ready for production in 2022.

The facility is expected to increase Taiga's production capacity to 80,000 units by 2025. The facility will begin at a 200,000-square-feet capacity and later to increase to 340,000 square feet.

Salesforce releases its first Trends in Manufacturing Report

Salesforce has released its first Trends in Manufacturing Report, which includes a survey of 750 manufacturing leaders globally, including 50+ Canadians, to help guide decision making in becoming "future ready" across all areas of business. Key report findings include:

- Eight in 10 global manufacturers (81 per cent) say they need both new approaches and new tools for accurate forecasting.
- 95 per cent of global manufacturers admit to applying manual approaches to their forecasting, with less than half of manufacturers using mostly-automated tools.
- 31 per cent of global manufacturers say COVID-19 significantly changed their need for improved marketing/customer communications and 30 per cent of manufacturers say COVID-19 significantly changed their need for customer service capabilities.
- Over half of manufacturers consider the changes to customer service and sales capabilities to be permanent.
- Over half of global manufacturers rely on a primary manual process for generating quotes/proposals, prioritizing leads/opportunities and determining what action to take on accounts.
- Canadian C-suite manufacturing executives say the following is critical or high priority over the next 24 months:
- Increasing process efficiencies (82 per cent)
- Demand planning (82 per cent)
- Digital transformation (86 per cent)
- New service offerings (86 per cent)

COMMUNICATING EFFECTIVELY WHEN EVERYONE IS ZOOMED OUT

RECENT EVENTS HAVE INCREASED ADOPTION OF TECHNOLOGY TO COMMUNICATE, BY USING VIRTUAL MEETINGS.

BY SHAWN CASEMORE

echnology has definitely saved many of us during the pandemic, allowing us to communicate with employees, customers and suppliers all from the comfort of our sparse office or even home office.

There is only one problem; we stopped considering how we best communicate for the most impact. For those trying to lead a team, be they engineers, project planners or sales, there has to be more strategy about how we use technology.

There is more to life than virtual meetings. The default of sending cold emails (when spam filters are increasing and patience for cold emails are decreasing) is not the best approach. Instead, making a connection requires placing some thought (and effort) into considering how to best reach out to each and every customer.

Could we send a direct message on LinkedIn? Would a voice message, followed up with an email, make more sense?

There are plenty of tools and approaches that can be used. As the saying goes, just because you have a hammer does not mean you treat everything like a nail.

As much as the events of late have increased the adoption of using technology to communicate, the tendency has been to latch onto a single solution. The most common, of course, has been virtual meetings. Those meetings have taken the place of external meetings, internal meetings, desk side chats, oneon-one discussions, lunches,



PHOTO: fizkes / Getty Images

team building, etc.

No wonder most people are tired of virtual meetings. The suggestion is not to cancel them, but they have their place. As most people have realized, not all virtual meetings are productive, and most fail to keep the attention of almost everyone except the speaker.

A year ago, suggesting to manufacturers to incorporate more virtual meetings in their communications would have been a great recommendation. Back then, most struggled with either having too many face-to-face meetings, or not having enough.

However, due to circumstances beyond our control, many people have quickly shifted from thinking about how to incorporate virtual meetings to thinking they are the only option available. However, they are not.

There are plenty of options that can and should be used to communicate effectively. People just need to spend a little bit of time considering what the best communication tool is for their purpose. Want to send a quick message to a large group? Try a group text. Considering how to share some personal news? Send a group voice message. Want to send a personalized email with video? Check out Loom.com.

Virtual meetings still have a place, of course. If you need to share something visually, a virtual meeting is likely the best approach.

Five questions to effective communication

Here are five key questions for ensuring you are choosing the best approach to improve the effectiveness of your communications, both internally and externally. Ask yourself these questions to determine what the best tool or approach is for your communication to achieve its intended purpose:

- 1. What is the objective of my communication? What is the best possible outcome of this communication?
- 2. What options do I have to connect and ensure my communi-

cation objective is met? Would it be best to make a call, or would a brief video sent from my phone make more sense? 3. How will I measure the

- effectiveness of my communication? What will tell me my choice of tool worked or did not work?
- 4. If my initial approach does not work, what will my next step be? If I try the phone and do not get a response to my message, how will I proceed?
- 5. Conduct a survey. Ask the recipient of my message if it was the best way to communicate, or if they have other suggestions for the future.

Communication is personal. Always consider that how you prefer to receive a communication may differ from how someone else would prefer to receive the very same message.

Hopefully the world emerges from this pandemic in 2021 and gets back to some degree of normality. That said, the impact on external and internal communication has forever changed. People now have a greater willingness to accept and use technology.

As such, people need to take the time to consider the best approach to achieve their objective. Just because you have a hammer does not mean you should not put it down and go find a wrench, if the wrench would be better suited for the job.

Shawn Casemore helps companies accelerate their growth. To learn more, visit his web site at www.shawncasemore.com.



Getting the **LEAD OUT**

LITHIUM-ION BATTERY MANUFACTURER GROWING MARKET FOR MATERIAL HANDLING APPLICATIONS.

BY ANDREW SNOOK

f you have ever worked in a distribution warehouse or manufacturing facility, you have likely had more than one run-in with a lead acid battery. Long the go-to choice for material handling equipment, ranging from pallet jacks to forklifts and reach trucks, lead acid batteries have dominated the battery market. However, lithium-ion battery technologies are finally starting to make significant inroads. In late 2020, The Raymond Corporation announced the launch of its energy essentials lithium-ion battery line that supports the company's family of material handling equipment, including its forklifts, pallet jacks and swing-reach trucks.

"Energy essentials distributed by Raymond enables complete and unique integration between the truck and battery, giving full visibility to operational data elements that include state-ofcharge and fault codes," said



Jennifer de Souza, Senior Director of Energy Solutions, Procurement and Leasing, The Raymond Corporation. "Engineered to excel in the toughest material handling applications, these lithium-ion solutions provide our customers with significant productivity enhancements, including increased uptime and reduced electricity costs."

The Raymond Corp. signed a strategic supply agreement with Mississauga, Ontario-based Electrovaya, which will supply battery systems for Raymond's energy essentials battery line. Electrovaya will supply Raymond exclusively distributed Raymond branded lithium-ion



batteries that are UL 2580 listed and compatible with most Class I, II and III Raymond lift trucks. These battery systems use Electrovaya's NMC ceramic lithium-ion battery technologies and provide a full integration with the Raymond vehicles, according to a recent statement by The Raymond Corp.

This deal could mark the beginning of a significant shift in the battery marketplace.

"Right now, lithium-ion batteries take up less than five per cent of the market, but that can change overnight," said Raj DasGupta, VP of Technology and Business Development, Electrovaya. "I'm surprised it's taken



Energy essentials distributed by Raymond enables complete and unique integration between the truck and battery, giving full visibility to operational data elements that include stateof-charge and fault codes.

this long for lithium-ion batteries to displace lead acid batteries."

Electrovaya recently signed agreements with several major corporations, including Walmart Canada, to supply lithium-ion batteries for their material handling fleets. DasGupta said that interest in the company's battery technologies has increased substantially since the company first decided to target the material handling market in 2017. Electrovaya supplies its batteries across a wide variety of industries, with a significant portion of its customer base currently active in the food distribution market.

"Those operators typically operate those vehicles 24/7,

365 days a year. So, they have the highest priority customers, especially in the pandemic, where food distribution is so key to keep moving," said DasGupta. "This market is starting to move now. With our customer base, after these guys have operated our batteries for a couple of months, most of them have come back with a statement that they would never buy a lead acid battery again."

He also added that companies that run their material handling equipment for two to three shifts a day receive clear operational efficiency benefits from using his company's lithium-ion batteries.

Ensuring the lithium-ion batteries are safe to operate has been a key focus for Electrovaya.

"Safety is a concern for warehouse operators. If you have a car fire, it's outside. If you have a fire in a forklift, you can burn down an entire building," said DasGupta. "We completed a UL-2580 electric vehicle certification for all of our batteries going into these forklifts and have a UL-2580 listing now. That's quite significant."

These batteries are not just designed for new material handling equipment. They have been designed for retrofitting existing fleets.

"We've designed them to match the weight and size of lead acid batteries. You need some software updates on the trucks and some communication updates, but the batteries, for the most part, are compatible with any forklift," said DasGupta.

The up-front purchasing costs are typically three to four times higher than a lead battery, but the return on investment makes them worth the additional cost, DasGupta argues.

"If you're replacing three lead acid batteries with one lithium-ion battery, then with the energy savings, maintenance savings and longer life span, you're looking at an ROI in three to four months for heavy users. If you're a lighter user, then within a year or two," he said.

Andrew Snook is a freelance B2B magazine editor and writer based in the Toronto area.



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DIGITAL SOLUTIONS

BY RICHARD KUNST

OVID-19 has spawned its own vocabulary. "Physical distancing", "super spreaders" and "elbow bump" have all come to mean very specific things over the past 12 months, in terms of the way we relate to one another. During the pandemic, the word "pivot" has come to represent how businesses have sought out new revenue streams, while unable to tap into their traditional means of earning income. Clearly, the Coronavirus has forced businesses to adapt the world over. But is your business really pivoting, or are you going through a complete business transformation, from product and process strategy to delivery?

As is the case for many industries, COVID-19 has changed the arena of business consulting. For the past 15 years, the favoured approach was to visit a client site, where consultants can absorb and assess the sights, smells, sounds and the aura of culture. Consultants then could formulate a recipe of success specific to that client with rapid returns.

Desire to travel thwarted, plus current travel restrictions in effect, makes in-person physi-

Are you really plotting? The current travel restrictions in effect Makes in-person physical Meetings a distant Memory. Yet, the need for business improvement still exists and is perhaps even amplified.

cal meetings a distant memory. Yet, the need for business improvement still exists and is perhaps even amplified. The passion to help others has not been subdued. Therefore, what is the answer? A digital transformation that would still allow coaching on the application of lean methodologies, to provide a path for transformation of businesses, while continuing to add high value to a wide range of industries.

Safety first

The first thing to know was that, however the transformation was, it had to be secure. For many businesses, a digital solution has become a mainstay of the new equation. Thankfully, people have become more tolerant and accepting of digital interactions, as they now become a common element within daily life. However, with that acceptance also come risks; such as cyber security and cyber attacks. Kunst Solutions' website witnesses up to 1.5 million attacks per month. Therefore, a critical element of your transformation has to be increasing your resistance to cyber attacks, especially as incidents of ransomware are exponentially on the increase. A successful attack could 1) cripple your business, 2) cost a lot of money or 3) cost you your business, either physically or indirectly, as customers start to avoid you.

With security a paramount concern to protect websites, and our clients who are willing to share the gift of their intellectual property, it is not only prudent, but imperative to cherish and protect that gift of information.

Change your offering

Over the past year, businesses have had to adapt, and adapt quickly. Not to mention that organizations, and clients among them, are migrating through a tsunami of change. Because of the pandemic, changes are being made intuitively with the concept that they will only be



THE PASSION TO HELP OTHERS HAS NOT BEEN SUBDUED. THEREFORE, WHAT IS THE ANSWER? A DIGITAL TRANSFORMATION THAT WOULD STILL ALLOW COACHING ON THE APPLICATION OF LEAN METHODOLOGIES, TO PROVIDE A PATH FOR TRANSFORMATION OF BUSINESSES, WHILE CONTINUING TO ADD HIGH VALUE TO A WIDE RANGE OF INDUSTRIES.

temporary in nature. In the past, work would be with clients onsite to navigate change management; something that was not an option for a year.

Change your delivery

When you cannot open the doors to your store, you still have to figure out a way to get your products into the hands of your customers. E-commerce boomed in 2020, as businesses raced to get their offering online quickly and efficiently.

As consultants and improvement coaches, the company had to figure out how to deliver e-learning that matches the quality of in-person delivery. When on-site, it is easy to share stories and speak to one slide for hours, while monitoring the class's facial and body expressions to ensure keeping them engaged, but more important that they are absorbing.

A transition to e-learning, even for skilled trainers, is not just a simple change of venue, but adds a whole new dimension to your delivery to ensure student

Teamwork

engagement, comprehension and application. Students will not sit in a chair for a whole day learning virtually, but they need short, high impact lessons. Anything beyond a two-hour engagement you will lose their interest. Since body language and facial impressions cannot be monitored the same way with e-learning, these subtle clues need to be replaced with comprehensive testing and feedback analytics so courses can be quickly adjusted.

Is this a pivot? No, it is most likely a complete rethink of your business strategy, and it is going to require looking deeper to be more effective, while providing value to your customer. As devastating as the pandemic has been for so many people, both personally and professionally, it has also given us an opportunity to re-imagine businesses in ways we never thought possible.

While people hope for the demise of the "elbow bump" and the return of the handshake, or even the hug, it is also hoped that this challenging time spawns innovation, rewards flexibility and ultimately helps people shift the way they work for the better.

Richard Kunst is an author, speaker and seasoned lean practitioner based in Toronto, who leads a holistic practice to coach, mentor and provide management solutions to help companies implement or accelerate their excellence journeys. You can reach him at: www.kunstsolutions.com. A s one of the largest distributors of Motion & Control, Industrial Filtration and Automation solutions in Canada, Wainbee remains a reliable source for our customers, especially during these challenging times.



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Getting serious about **E-COMMERCE?** avoid these costly errors

MANY BUSINESSES HAVE STARTED ONLINE SELLING, AND MANUFACTURERS ARE AMONG THOSE LOOKING TO GET IN ON THE ACTION. THIS YEAR SHOULD BE THE TIME THAT MANUFACTURERS **KICK-START THE E-COMMERCE PROCESS.**

BY DEREK CORRICK

-commerce was already gaining significant traction across many industries over the last decade. COVID-19 has put that trajectory into overdrive. Whether it was by choice or something forced upon them by recent events, many businesses have jumped head first into online selling, and manufacturers are among those looking to get in on the action.

While manufacturers have made some movement towards this goal in recent years, it is no stretch to say that they still have a long way to go. As recently as 2018, only 5.9 per cent of B2B manufacturing sales came from e-commerce, according to numbers from Digital Commerce 360. As they continue to grapple with the impact of COVID-19, there has never been a better time to add more operational efficiency, attract more customers, and lay a foundation for long-term growth by digitizing their sales and supply chains. This year should be the time that manufacturers who want to get serious about e-commerce kick-start the process.

The best way to start is to take a step back and let go of certain assumptions that, if they were ever right, are certainly no longer relevant. The first is the still widely held belief that B2B and B2C sales occupy separate

lanes that require separate approaches. In fact, the lines between them have blurred to the point of being irrelevant. The people who make up B2B audiences, be they buyers, customers or partners, are by now largely made up of younger digital natives. For them, Amazon is the standard by which they measure online shopping, regardless of who they are dealing with. They have come to expect a seamless and engaging experience that they will abandon at the first sign of friction. It is dangerous to assume that they will willingly revert to the traditional, nofrills, "rack and stack" approach that many manufacturers have traditionally taken to presenting their products online.

According to Forrester research, 68 per cent find that gathering information online is superior to interacting with a sales rep. In addition, research shows that the top driver of B2B buying decisions is the availability of product information, which buyers inspect to be easily available online, when and how they want, customized to their unique needs.

Once rid of these assumptions, manufacturers can begin to move forward with an e-comAs recently as 2018, only 5.9 per cent of B2B manufacturing sales came from e-commerce, according to numbers from Digital Commerce 360. As they continue to grapple with the impact of COVID-19, there has never been a better time to add more operational efficiency, attract more customers, and lay a foundation for long-term growth by digitizing their sales and supply chains.

merce plan. Here are three key factors to succeed as they embark on their journey.

Start small, but make an impact

It is often tempting to dive into the technology aspect out of the gate, or create aggressive plans that can lead to more risk than opportunity. That is a mistake. Instead, take time upfront to focus on the business aspects. Get crystal clear on what your core customers mostly need and want from you, right now and into the future. Compare that to what you are currently offering them, and map out what has to happen to start bridging the two divides.

As an example, manufacturers are often the first stop for customers looking for replacement parts. Given their physical supply chain roots, many have simply opted to catalogue the information supplied to them by their distributors, and assume that some static images and basic details would satisfy the need. This "just enough" approach does little to engage digital-savvy customers, and over time risks tarnishing the manufacturer's brand.

What if instead of offering static product data that is quite likely lacking in accuracy, a manufacturer offers customers a detailed and customized overview of spare part data that is automatically updated behind the scenes whenever a distributor makes changes, and that is presented in a way that makes it simple to browse and order? It is just one great example of a realistic goal at the outset that adds value, and lays down a foundation that can be replicated as e-commerce capabilities grow.

Mastering your data is critical

The e-commerce landscape is quickly becoming a case of the haves versus the have-nots, and it is usually data that divides them. Data-driven enterprises add relevance and personalization to their customers' online experiences, while others are falling behind. That is why implementing a product information management approach at the outset of any e-commerce strategy is critical.

Knowing your customer's buying preferences and offering accurate product information is impossible without an effective data strategy. From search to product recommendations to order fulfillment, you simply cannot accomplish your goals without a consistent, end-toend approach. Therefore, it is recommended that manufacturers begin the work now to make that possible. This will allow for context-driven product information. For example, allowing a tool to be featured based on its usage in an automotive versus a construction environment, depending on the needs of a customer.

Your brand, your story, your future

Finally, even if they are dipping their toes into e-commerce for the first time, manufacturers should know how they want their brand to evolve over the long-term, and ensure they have an e-commerce strategy that will take them there.

Providing a great customer experience depends on compelling, accessible information delivered in a timely and accurate fashion. However, it is also about context and adding value. Providing online buyers with additional offers tailored for them, meant to ease and accelerate their buying decisions, or help them make product modifications on the fly without having to call and talk to someone, are ways to better engage buyers and strengthen a manufacturer's brand. For most manufacturers, launching an e-commerce initiative is still an uncharted territory, but it does not have to be painful. With the right guidance and approach, digital programs can bring quick wins and open a business up to new customers. All manufacturers need to do is take the first step.

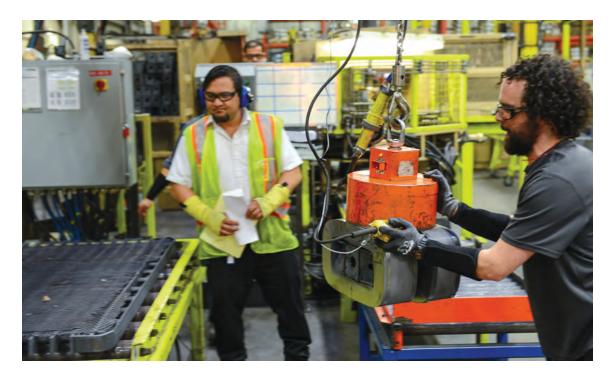
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BY RON HARPER

ogent Power Inc. has implemented a new employee communications platform, called Blink, which is helping communications of teams and increasing active engagement.

A challenge with any business is to create a high level of engagement and alignment with their people and work teams. Gallup, an advisor on engagement, found out the following results in its reports:

- 41 per cent reduction in absenteeism
- 17 per cent increase in productivity

- 24 per cent less turnover in high-turnover organizations
- 10 per cent in customer ratings
- 20 per cent increase in sales

• 21 per cent greater profitability This is a pretty strong case for an investment in employee engagement. With that being said, Gallup regularly reports that manufacturing team engagement averages are below 30 per cent.

Maintaining a high level of actively engaged members of a team is important. The goal is to achieve this active engagement, where people are passionate about their work, with clear alignment with the goals and mission of the company. This creates the greatest organizational results, and the best chance to thrive and create feelings of success and fulfillment.

Many manufacturers and service companies operate on an expanded work schedule. Cogent operations teams work on a 24/7, 12-hour work schedule. This makes connection, engagement and alignment very difficult, as leadership and staff work on a different schedule and rhythm. During any month, members of the operating teams will work less than one-third of the time, side by side on the same schedule, as well as the staff and their senior leaders. Despite all the advances in communications technology, many manufacturing and service companies have almost no direct channel of communication to its operations people.

These challenges of engagement and communication came screaming at the team in the early days of the COVID-19 pandemic. As information was coming at people from all directions; media sources, social media, friends and neighbours, it became very difficult for the company's messages, policies and direction to find their way through. Misinformation and misunderstandings were rampant, and as an essential business, the company needed to keep its business going, and keep people safe, healthy and informed.

We had been, for some time, looking for a platform to communicate and connect with its team more effectively. All the solutions that were encountered were either cost prohibitive, not simple enough, needed an enterprise email address, or just tried to do too many things. In the search, we stumbled across a relatively unknown app called Blink.

The app seemed to have everything that the team was looking for; a news and information feed that could share company-wide or individual team information; a confidential instant messaging channel that could allow everyone in the company, regardless of their role, a two-way communication to everyone; and an intranet-like hub, where company policies, information, news, forms and



micro-apps could be accessed. All of this could be achieved through the personal smartphones of everyone at the company.

The Blink sales and onboarding teams have been great to work with. Within two weeks, there was a 50-person active evaluation going, and within eight weeks of the company's first sight of Blink, the company launched a wide roll out. With the Blink team and 15 internal designated Blink champions, the roll out has met all goals. Within just a few weeks, we had 75 per cent of the company's employees activated on the app, and use of the app grows every day.

The team feedback has been tremendous, and employees are now able to exchange and have dialogue on all important company issues, from health and safety reporting and information sharing; to news and reports on client feedback; sharing production information and achievement; and human resources information and access.

Company policies, procedures, and employee services are now instantly accessed by all employees through their phone. It has allowed us to proactively communicate changes to its COVID-19 policies, and information and services related to recent Ontario pandemic measures.

In terms of business benefits of the Blink app, we are concentrating on several key target areas:

Leadership

Using the Blink app to increase leadership presence and connection with all work teams. The level of engagement between all levels of leadership and their team is significantly enhanced through the app, both through news feeds and chat messages. This enables active engagement amongst teams, and can create a strong alignment with the company and team goals and mission.

Communication

Using the communication platforms to share important company information, news, plans, practices and policies. Given the diverse shift schedules that many of the teams work, and now those working on a remote schedule through the pandemic are able to get important company information and priorities at the same time, efficiently and effectively. It has allowed to increase health and safety awareness, and has contributed to improvements in reduction of safety incidents, and the engagement has improved productivity.

Recognition

Blink offers the ability to share

quick and easy feedback and recognition to individuals and teams, both from each other and their leaders. Timely recognition, celebration and feedback are important elements in creating a strong work culture and active engagement.

Giving the team a stronger voice

In all workforces, manufacturing, services or otherwise, the people and team's sense that their voice is both important and heard is essential. Blink provides the channels and platform for this level of two-way connection, feedback and a stronger voice. This is important to help your team be and feel informed, and through effective communication everyone in the company can be activated towards the goals, mission and vision of the company.

Ron Harper is President and CEO of Cogent Power Inc.

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EXCELLENCE IN MANUFACTURING CONSORTIUM

WOWR CANADIAN MANUFACTURING NETWORK



MANUFACTURING

BY KIM LAUDRUM

nderstanding customers' passions is key to achieving consistent business growth over several decades, said Tony Solecki, President, Caframo Ltd.; a Wiarton, Ontario-based manufacturer of specialty fans and heaters for the consumer market and laboratory stirrers.

Founded in 1955 as Canadian Fractional Motors by German immigrant Hans Heidolph, the company was known for making products with small motors with less than one horsepower of output. Solecki, with a computer science degree and an MBA from Western University of Ontario, honed his skills at **RBW** Graphics Transcontinental as a Manager in nearby Owen Sound. In 1994, he met and began working for Heidolph, who was seeking a General Manager to take over the business when he retired. In 1996, Solecki bought the company.

Since then, Caframo has grown from 20 employees to over 100. It has been named a great place to work. Innovations earned the company a Vesta Award for its Ecofan 8200 series for wood stoves from the hearth and accessory industry in 2019. It was named Business of the Year in 2018 by the Owen Sound District Chamber of Commerce. Caframo products are now sold into eight different market segments, and into more than 30 different countries.

"Most of the growth has come through exports," Solecki told Plant in an interview.

The privately held company increased exports from 40 per cent in 1996 to 75 per cent in 2018. Most of that is sold to the U.S., Europe and Australia. As well, Caframo exports to Japan, Norway, South Africa and about 30 other countries. In 2020, the company created Caframo Europe BV to smooth a path for its products into Europe. That was key to opening the door to Amazon Europe.

"For being where we are, that's significant," said Solecki.

Wiarton, Ont., home to Wiarton Willie, the famous weather forecasting groundhog, might

Stirred, but not SHAKEN MANUFACTURER THRIVES MAKING FANS AND LABORATORY STIRRERS DESPITE PANDEMIC CHAOS.



seem an unlikely place for a 20,000-sqaure-feet manufacturer's headquarters.

"But here we are today, and given that we export all over the world, it doesn't really matter where we are located," said Solecki. "It doesn't have great internet and it's been a challenge to operate at times during COVID, but the lifestyle is unmatched. I would take that deal every day."

Plant operations are housed in one half of the building. There, 50 people work to hand-assemble and manufacture products like laboratory stirrers for pharmaceutical companies, heat-powered fans for wood stoves, and 12-volt fans both for comfort in recreational vehicles, and for fighting mildew in boat storage. Caframo also sells fans, heaters and a range of other products into the household market.

"We don't make just one thing. We make a lot of things," said Solecki. Good at short-run manufacturing with quick changeovers, Caframo produces about 100 different products, involving 100 sets of tooling. Workers there regularly make 50 products at a time. According to Solecki, Caframo is "a niche market player."

"We don't want to compete with the big companies on price. They are going to win on that. We're not a big company but we're happy to make tens of thousands of units," he said. "Growth is important to us."

Solecki mentions growth strategies, including increasing distribution channels to retailers, among others, and driving demand through marketing. But the key strategy for growth at Cafarmo is innovating new products and developing existing ones for communities that share a passion.

"We call it 'insight in innovation'. We identify end users who share a passion, like boating or pharmaceutical research. We visit them. We collect the voice of the customer so we can understand their passion and see what their problems are, doing what they are passionate about. And when we see what the problems are, that becomes our insight, our 'a-ha!', now we understand their problem," said Solecki.

"We then look for ways to use the technology that we are good at; motors, heat transfer, plastic injection moulding, mixing, electronics, etc., and we ask, 'Is there a way that we can help the customer resolve their problem using our technology?" said Solecki. "That batch of deep insight into the end user's problem, combined with some innovation around how best to implement that technology, is what gets you to a new product."

Once the company has identified products for development, a multi-disciplinary team is put together, including someone from marketing, who understands the end user's problem, and an engineer to resolve it.

Solecki said that Caframo received an IRAP grant four years ago to introduce a "stage gate" development process. He credits the process with guiding their decision-making before either getting too far into a project that might fail, or getting a green light to proceed.

"You have to stop at each gate and ask, 'what more do I need to do to bring this product to market?' and 'have we learned enough to support this idea?" he said.

According to Solecki, product development is often the result of an end user approaching the company with a problem.

"We had a boat builder in Europe who had a problem with a windshield fogging up. He said, 'You guys know a lot about fans, can you help?" he said.

Therefore, the Caframo product development team analyzed the problem and came up with a new defogger to fix it.

Cows often give birth in winter when temperatures dip below freezing. The farmer needed a rugged heater. That was an end-user insight that was helpful in developing a new product and expanding market potential.

"We have to keep up with technology and reduce our costs," said Solecki.

Caframo's Sirocco 12-volt fan is a case in point. Solecki said it is his favourite Caframo product.

"It's helpful, quiet, salt-water resistant and shock-resistant. It's a really good fan," he said.

The 10-year-old design, though, was complicated with a mass of fine wiring and many moving parts.

"We had to make it in China," he said. "But the Chinese manufacturer wasn't the best at quality control."

Five years ago, the decision was made to bring the manufacturing from China to Caframo at Colpoy Bay.

"Quality took a real step up," said Solecki. He said that the process brought some big changes at Caframo. Solecki challenged the product development team, "How do we make it better?".

The Sirocco had a brushless motor, which created electrical noise.

"It was okay in industrial situations but not next to your bed," said Solecki. "It was one of our new electrical engineers who resolved the noise issue."

A cross-pollination of expertise from employees in software and electrical engineering were tasked with resolving the issue. Still, the fan had lots of fine wires, and 13 plastic injection moulds were needed to make parts.

"That volume of injection moulding meant we needed to invest in a new machine, which we did. It only takes 15 minutes to assemble the fan," he said. And Caframo now has more manufacturing capacity, thanks to the investment in the plastic injection moulding machine.

A great place to work

Caframo offers a full range of employee benefits, including flexible work schedules, structured training and community outreach. Last year, the company reached its goal to bring the starting wage to a living wage, as defined by the Ontario government for people living in the area. It is an investment that has paid off.

In March 2020, when COVID-19 hit Caframo's fan assembly line, all office workers began working from home to reduce the spread of the disease. Those left in the plant were required to wear masks, stagger start times and stay two metres apart. They doubled down on cleaning.

COVID-19 restrictions required the short-run line be changed from three-person workstations to single-person ones. That task fell to the employees themselves, who rearranged them, incorporating best practices.

"It took up more space and investment, but productivity went up," said Solecki. "They are just an amazing group of employees to deal with all these changes. We've been a lean manufacturer for a long time, but I think how people feel about their workplace contributes to productivity."

Solecki said the company is just beginning to see worsening

freight times, delays and higher costs from suppliers, as the result of the second wave of COVID-19.

"We've had to lengthen lead times and increase our inventories," he said. "Currently, we are maxed out on our incoming raw materials. We can't meet production. And our demand is only down a bit."

Time will tell the wider impact of the pandemic on manufacturing worldwide, but for now, vaccination programs underway offer hope on the horizon. The key to Caframo's future success continuing to understand the passion of those who use their products.

"As long as we are good at what we do, we will continue to grow." said Solecki.

Kim Laudrum is a Collingwood, Ontario-based business writer and regular contributor to PLANT. E-mail kimlaudrum777@gmail.com.

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ark, how's today looking? Everything moving along smoothly? Any delays we should know about?"

Daily check-ins. We have them with our workers and teams. We check in on the status of projects, timelines and deliverables. We monitor progress, identify roadblocks and then we take the appropriate steps to get things up and running again.

While these check-ins are common when it comes to daily work duties, they do not always happen when it comes to mental health. Workplace priorities and pressures, like deadlines and meetings, seem to come first, or at least that is what we tell ourselves. Add in the to-do's that occur outside of work, and mental health soon drops off the priority list.

Workplaces can see, and even measure, the toll that poor mental health can take on workers. When the well-being of workers is ignored, their mental health can decline, bringing productivity and morale along with it.

This domino effect is one reason why workplaces should consider creating formal health and wellness programs. By creating check-ins that are not just about projects and their deliverables, workplaces can gauge the status of their workers' health and well-being too.

A check-in each day can help keep workplace stress at bay

Mental health can be impacted by both individual and environmental factors. Let's go back to Mark, for example. Mark works Tuesday to Saturday. His shifts vary, but on most Saturdays, he finds himself missing his daughter's soccer games. On top of that, Saturdays at the plant are one of the busiest days. He often finds himself working on the line with minimal contact with others. Everyone is so busy that sometimes a simple "hello" goes unsaid. The workload is also so demanding that Mark often does not have a chance to take his breaks, which he typically uses to eat lunch and call his daughter to see how the game went.

Checking-in on invisible WORKPLACE HAZARDS

WITH REGULAR CHECK-INS AND A COMMITMENT TO WORKER-WELL-BEING, PSYCHOLOGICAL HAZARDS CAN BE ADDRESSED AND SUPPORTED, INCREASING THE HEALTH OF WORKERS AND THEIR GENERAL WELLBEING.

With the combination of long workdays, the emotional toll of missing time with his family and a demanding workload, Mark is feeling overwhelmed, but he is not comfortable telling his manager about what is bothering him. Instead, he pushes through at work and continues with the cycle of never feeling like he can keep up with family and work demands. Unfortunately, his manager does not notice that Mark is struggling, and as a result, does not think to check-in with him to see how he is doing. Because of the lack of communication, Mark's stress levels will likely go unnoticed, and might become worse over time.

Thankfully, employers can help workers like Mark. They can be understanding and compassionate of an employee's responsibilities that fall outside of the workday. They can also build a comprehensive workplace health and safety program, or even plan and promote a few fun workplace initiatives focused on well-being to help alleviate overall stress.

Employers can start by focusing on managing workloads and supporting healthy habits and encourage employees to take their earned breaks and "press pause". To help manage workloads and support the development of healthy habits, workplace leaders can explore the following:

- Focus on workplace culture. Promote the balance of work, life, safety, health and wellness to create an enjoyable work environment, increased productivity, and happier workers who feel encouraged and rewarded for their efforts.
- Review the job design in the workplace. Providing employees with clear outlines, responsibilities of their role and variety in job tasks are ways to improve job design.
- Touch base with workers about their workload to offer understanding and support. Managers, supervisors and team leads can ensure duties and responsibilities have been clearly communicated and understood, and that the worker feels supported in their efforts to achieve their goals. Workplaces should be prepared to offer support, such as redistribution of tasks, if the worker requires support.

- Workplaces can also **provide training** for both managers and workers, so they know to recognize the importance of psychological health and safety hazards, and unhealthy work conditions. This training should include concrete ways for co-workers to recognize and talk about mental health issues, and ways to seek support.
- Host a weekly or monthly lunch where workers can step away from their duties and enjoy each other's company. This is also a good opportunity for the employer to celebrate successes and milestones within the organization. These type of awards and events, no matter the size, can remind workers that they are valued.
- Start a fun-and-friendly walking club or a step challenge where workers are encouraged to use a portion of their break to get moving and exercise parts of their bodies that might be neglected throughout their workday.

Communication is a key part of building a healthy workplace. Make sure workers know your commitment to making their mental health a priority by developing a policy statement that is actively participated in by all levels of the organization.

Remember, workplace challenges are not always obvious. Psychological hazards like workplace stressors may not be easy to identify and may have negative impacts on workers' mental health. With regular check-ins and a commitment to worker-well-being, psychological hazards can be addressed and supported, increasing the health of your workers, and your overall bottom line.

The Canadian Centre for Occupational Health and Safety (CCOHS) in Hamilton contributed this article. CCOHS 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.

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AUTOMATIONDIRECT PROXIMITY SENSORS



AutomationDirect new rectangular eight millimetre by 16 mm inductive proximity sensors are available in flush and non-flush mounting options, NO or NC outputs and NPN or PNP logic. These capacitive proximity sensors have a potentiometer to adjust sensitivity and are available with an M8 quick-disconnect or two-metre pigtail cable, with

lifetime warranty. Also added are two new series of photoelectric sensors, with a two-year warranty. Both the eight mm round and eight mm by eight mm by four mm rectangular models are available in diffuse with background suppression, diffuse and retroreflective. These can sense objects at up to 2.2 metres distance. www.automationdirect.com

RINNAI BUILDING MANAGEMENT SYSTEM



Rinnai's new building management system (BMS) gateway provides a software system used to remotely control and monitor Rinnai commercial tankless water heaters. BMS gateway allows businesses to remotely turn tankless water heaters on or off, adjust water temperature, monitor flow rates and operation hours. The touchscreen user interface allows up to 15 view-only parameters, such as water flow rates, combustion cycles, operation hours and error code

history. BMS gateway works with Rinnai CU199 and CU160 condensing tankless models and uses BACnet, Modbus or LonWorks communication protocols. www.rinnai.us.

KAISER RAMAN RXN ANALYZER SUITE



Kaiser Optical Systems, Inc., embedded Kaiser Raman Rxn analyzer suite, features Raman RunTime embedded control software. Kaiser Raman embedded analyzer collects in situ process measurements, enabling real-time process monitoring, optimization and control. Raman Rxn portfolio (Raman Rxn2 and

Rxn4 base analyzer models), integrates analyzer and control software in a fixed purpose device. Kaiser Raman technology communicates with external systems over networks using standard automation protocols.

Raman Rxn2 and Rxn4 analyzers perform self-calibration, utilizing spectral correction methods in applications when periodic system calibration is not required.

Kaiser Raman embedded analyzers can be configured with 532, 785 or 1000 nanometre excitation wavelengths, with the ability to measure up to four channels. Measurements can be taken inline, online, or at-line. www.us.endress.com

OPTRIS SYSTEM FOR GLASS TEMPERING PLANTS



Optris GmbH developed a system based on the PI 640 IR camera that can be used on any glass tempering system. Top Down GIS 640 R helps solve the low emissivity problem: above the glass, at the exit of the oven, an infrared camera type PI 640 is installed, which determines the temperature distribution of the

individual panes over the entire system.

Below the glass, on the side without the Low-E coating, a CT G5L pyrometer measures the glass temperature. The individual pixels of the IR camera image are referenced to this measured value. The system also calculates the glass surface area. Both the infrared camera and the pyrometer are equipped with a digitally controlled optics protection system.

www.optris.global

PRO-FACE AMERICA PS6000 MODULAR IPC SERIES



Pro-face America PS6000 Modular IPC Series offers a modular design, with units available with multiple screen sizes, processor options, and are configurable (or can be bundled) with

BLUE HMI Development Software or BLUE Open Studio Lite SCADA software. The product includes expanded offer with Core i5 Quad core processor, Windows 10 OS and migration from PS5000 series. www.profaceamerica.com.

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AutomationDirect schmersal e-series 30-millimetre pilot devices provide operator controls and indication for industrial and commercial applications.

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E-Stop versions are available with either a 40mm or 55mm operator and with momentary (general purpose), push/pull or twist-to-release (emergency stop) action types. Selector switch options include two-or-three-position configurations and maintained or spring return action styles. Indicator lights are available with various lens colors, with dome or flat lens options.

www.automationdirect.com





It takes all hands on deck, working together and across borders, to tackle climate change

BY JAYSON MYERS

he Biden administration is off to a bumpy start in its relationship with Canada by cancelling the Keystone XL pipeline. During his first call with U.S. President Joe Biden, Prime Minister Justin Trudeau expressed his consternation over the President's move to cancel the pipeline, a decision made on his first day in office. While the PM underscored "the important economic and energy security benefits of our bilateral energy relationship," he acknowledged at a press conference following the call that there will be many opportunities to work together in the future to address issues where the two countries are more aligned. Given how closely Canada and the U.S. are woven together economically, socially and environmentally, the two countries need to work together to overcome the big challenges they both face; challenges that know no borders. Above all, they need to undertake joint and effective action to tackle climate change.

Canada has welcomed the Biden administration's re-engagement with the Paris Climate Accord. The President and PM are now both committed to achieving a net-zero emission economy by 2050. However, it will take much more than government targets, regulations, taxes and emission trading systems to make real progress towards their shared objective, while at the same time maintaining economic prosperity, sustaining the competitiveness of important industrial sectors in both countries, and securing well paying jobs for workers.

Neither government will be successful in making an economically and socially sustainable impact on emission reductions unless consumers and businesses buy in. They need feasible and affordable options when it comes to transportation, heating and cooling, and other forms of energy use. New products, technologies and energy sources have to be manageable and available at competitive costs, if they are to be part of the solution. Otherwise, consumers and companies will simply turn to other alternatives at hand, like shipping heavy oil by rail instead of pipelines.

That is why innovation is so important. The future will be one of zero-or-low-emission vehicles and buildings, energy efficient processes in industry, and less carbon intensive and recyclable products for consumers. It will depend on new and radically upgraded infrastructure,

THAT IS WHY INNOVATION IS SO IMPORTANT. THE FUTURE WILL BE ONE OF ZERO-OR-LOW-EMISSION VEHICLES AND BUILDINGS, ENERGY EFFICIENT PROCESSES IN INDUSTRY, AND LESS CARBON INTENSIVE AND RECYCLABLE PRODUCTS FOR CONSUMERS.

smart transportation systems, energy distribution grids, alternative energy fueling stations for vehicles, smart interconnected urban infrastructures, new carbon capture and storage systems, as well as vastly improved methods of waste re-use, recycling and disposal. It will also involve new types of behaviour sustained by services, and technologies enabling vastly improved methods of energy management and greater sharing of resources.

New technologies, alternative energy sources, and low-emission products and production processes will be needed. But great new ideas, inventions and technologies will only sit on the shelf unless they are adopted, scaled-up and commercialized by industry, and then purchased by consumers and governments alike.

The President and PM have a common interest in accelerating innovation. This will require eliminating regulatory roadblocks and expanding programs that encourage and help finance technology adoption and scale-up, as well as technology development. Government procurement will be an important tool for both administrations, if used wisely.

Three considerations should guide their actions. First, entire value chains that extend across the common border must be taken into account. Electric vehicles are only a solution if electricity is generated by a low emitting energy sector and stored in batteries that do not themselves cause major environmental degradation. Hydrogen power is an option, but hydrogen production requires large amounts of electricity, and most of it is supplied by the oil and gas sector. There are other alternatives: nuclear, solar, wind, geothermal and biomass, but the reality is that fossil fuels still account for over 70 per cent of the U.S. electricity production, while Canada offers an important source of clean energy.

The oil and gas sector will remain an important energy source for the foreseeable future. It is the mainstay of energy security for both the U.S. and Canada. Going forward, oil and gas companies in both countries must be engaged as partners in tackling climate change. They are already world leaders in adopting new technologies that have led to significant reductions in the carbon intensity of their operations. Also, they will continue to play a pivotal role in making progress towards a net-zero emission energy future. Second, policies must be geared to a world of advanced manufacturing. Manufacturers will be the enablers when it comes to converting technologies into real applications for consumers, businesses and governments. It is the sector that will scale up and produce the devices and products of the future. Manufacturers' adoption of new materials, production technologies, business and logistics systems will not only be instrumental in lowering emissions, but in improving productivity, competing and growing in world markets, and maintaining high quality jobs in the future as well.

The economic prosperity of Americans and Canadians will be built on world leading advanced manufacturing capabilities. This begins with a strategy and positive incentives for manufacturing renewal and growth, but let's be real. The competitiveness of the manufacturing sector cannot rest on the production processes of the past, but on the ability of the companies to seize the opportunities that advanced technologies offer to enhance value for customers and significantly improve productivity.

Third, U.S. and Canadian government procurement policies need to look to the future and take the integrated nature of the manufacturing and energy value chains into account. Like climate change, innovation knows no borders. There will be much greater opportunity if the U.S. and Canada work together to build the net-zero emission economy of the future. Buy America policies that exclude Canada will only stand in the way of achieving the shared innovation and climate change objectives.

Tackling climate change is no easy job. No one should claim it is. There is no silver bullet. It takes a lot of hands from every sector of the economy and society, working together and across borders, to make progress. Canadians are looking to the Biden administration for the leadership, collaboration and willingness to build a common vision and purpose in achieving net-zero emissions. The rest of the world is as well.



SPECIAL 2021 FEATURES

SUPPLY CHAIN MANAGEMENT May / June

Business uncertainty resulting from volatile trade issues and global disruptions are forcing manufacturers to examine their supply chains.

Who supplies their suppliers, and where are they sourcing materials? What happens if there is a disruption and who are the alternate suppliers? Are they geographically close?

Should manufacturers be looking at reshoring?

These are questions **PLANT** will address in a special report.





HR REPORT, EXECUTIVE SKILLS AND TRAINING July / August

PLANT magazine's annual salary survey of manufacturing executives shows senior management and business owners how their compensation breaks down according to a range of criteria. But it also provides senior management's take on business confidence; investment issues, challenges; and changes they foresee over a five-year span.

PLANT will also look at the skills issue. A shortage of qualified people is an ongoing problem. Where are the gaps? How do leading companies approach training, recruitment and employee retention? What are the most effective ways to find the right people?

FACTORY OF THE FUTURE September / October

Canadian manufacturers lag their global peers in the implementation of technologies, which improve productivity, production efficiency and provide deeper visibility into business operations. As companies recognize the need to adopt "factory of the future" technologies to deal with skills and labour shortages, improve production and provide real-time



views of their business, **PLANT** will identify trends, technology solutions, application of business intelligence and the challenges to implementation and how to address them.

CYBER SECURITY November / December

A growing concern among manufacturers is the risk of cyber attacks.

It has become increasingly necessary for manufacturers to implement risk management plans to protect themselves, and to deal with incursions that will come.

Our in-depth report will explore what leading companies are doing to stem the risk of cyber attacks, and deal effectively with them when they do occur.



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