CURRENT
COUNCILGREATLAKESREGION.ORG
FALL/WINTER 2016

BETTER BORDERS
Promoting travel, commerce, and national security

L-R: Robert Deluce, president and CEO of Porter Airlines located at Billy Bishop Toronto City Airport, and Senator Patrick Leahy of Vermont.

Is Canada prepared for the effects of climate change?

Milwaukee leverages its most valuable resource, water

Public opinion about Canada-U.S. Relations

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For more than 100 years PortsToronto has worked to make connections.

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We are PortsToronto and we are making connections for businesses and travellers alike.
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WATER IS LIFE

Canada’s pipeline companies respect how important water is to all our lives, and to future generations. When pipelines cross rivers and streams, special care is taken. Innovative technologies, decades of engineering expertise and best practices, along with 24/7 monitoring, allow us to protect our environment and our water.

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In spite of the image of the region as a declining rustbelt, the Great Lakes and St. Lawrence Region (GLSLR) remains a dynamic economic region with an abundance of opportunity. The region accounts for roughly 50 per cent of total Canada-U.S. cross-border trade and approximately one third of total Canada-U.S. two-way trade with the world. With a population of 107 million and a GDP of USD $5.8 trillion, if taken as a separate economic unit, the region would be the third-largest economy in the world after the United States and China, supporting some 50 million jobs, or roughly a third of the combined American and Canadian workforce.

The region is home to leading research universities, colleges, and educational institutes that are critical for talent development and retention. A total of 19 of the top 100 universities in the world are Great Lakes institutions. Combined, the region produced 47 per cent of university graduates in both countries (2010). Academic institutions in the GLSLR collaborate with a large-scale private sector research sector. In 2011, the region accounted for nearly 24 per cent and 72 per cent of R&D funding in the U.S. and Canada respectively. The region also generated 26 per cent and 68 per cent of patents in the U.S. and Canada in 2012.

With the ebb and flow of globalization, the region’s relative strength with respect to labour intensive manufacturing has been softening at every level, as output shifts to developing and emerging economies and technology enables even greater participation in these markets. The region has also been challenged by productivity shortfalls and demographic headwinds. On the other hand, the services industry is growing—from financial services and health care, to education and professional services.

The economy of this vital trade corridor and gateway to world markets, as a result, appears to be undergoing a slow but substantial economic reconfiguration. With the global commerce becoming even more connected, more competitive, and more complex, the forces of hyper-globalization are redefining the region’s contours even further—and faster.

The second edition of the Current highlights a number of ways that the Council and its public and private sector partners are positioning the Great Lakes-St. Lawrence Region to win in this new economy, from freeing up the U.S.-Canada border for goods and people while jointly identifying potential threats, to developing, attracting, retaining, and sharing talent and creating new economic clusters in areas like life sciences and water technology.

It’s an exciting agenda, and we need you to be a part of it! Contact me to learn more about how you can support our public policy research and the annual Great Lakes Economic Forum that is held every spring.
WHAT’S HAPPENING

MI INNOVATION ALLIANCE
GLOBAL AUTOMOTIVE & MOBILITY INNOVATION CHALLENGE (GAMIC),
OCTOBER 25, 2016 – APRIL 2, 2017

The 9th annual MI Innovation Automotive & Mobility Innovation Challenge (GAMIC) is the automotive industry’s top event, designed to bring new innovations faster to the mobility industry in a time of tremendous change. At least four winners of events scheduled across four cities in Canada and the U.S. will receive more than $200,000 worth of business commercialization acceleration services. These facilitated meetings with key decision-makers have helped fast-track the commercialization efforts of a number of our prior year participants. mitalliance.org

CANADIAN BROWNFIELD AWARDS,
NOVEMBER 29, 2016, TORONTO

The 2016 Brownie Awards continue a long tradition of providing national recognition of the builders, innovators, and visionaries who are dedicated to the rehabilitation of brownfield sites that dot cities and municipalities around the country. Founded in 2001 by the Canadian Urban Institute, the Brownie Awards recognize the innovative efforts of these professionals to turn around sites that were once contaminated, under-utilized, and undeveloped into productive residential and commercial projects that contribute to the growth of healthy communities across Canada. The 2016 Brownie Awards will be held at the Delta Toronto Hotel on Tuesday, November 29. Individual tickets and corporate tables can be purchased at brownieawards.ca

OILSEED AND GRAIN TRADE SUMMIT,
NOVEMBER 15-16, 2016, MINNEAPOLIS

Hosted by HighQuest Group, the 11th annual Oilseed and Grain Trade Summit is the premier destination for learning, networking, and conducting business in the global oilseed and grain industries. Last year over 350 buyers and sellers of oilseed products, feed grains, and food ingredients from 32 U.S. states and nearly 20 countries convened. and more than 45 industry experts discussed cutting-edge knowledge and industry trends. oilseedandgrain.com

CHIEF INNOVATION OFFICER SUMMIT,
DECEMBER 5-6, 2016, NEW YORK

In order to form an effective innovation strategy, it is essential to identify and implement key drivers of innovation. These include company culture and idea generation. How can you then leverage these changes to drive key processes such as new product development, scaling, managing finances & future trends, all which will allow you to stay ahead of the competition. Hosted by The Innovation Enterprise Ltd., the Chief Innovation Summit promises two days of cutting-edge innovation learning and intimate, expert-led panels, with sessions from the industry’s leading speakers, the hottest topics, and some world-class networking opportunities. theinnovationenterprise.com/summits/cino-new-york-16
TOP100 PROJECTS KEY PLAYERS AND OWNERS DINNER, FEBRUARY 21, 2017, TORONTO

On Tuesday, February 21, 2017, ReNew Canada will host key players in the infrastructure industry at the Carlu in downtown Toronto to celebrate the 2017 Top100 Projects. Last year, more than 250 of the most influential players in Canadian infrastructure converged on Toronto's Design Exchange to recognize more than $161 billion in ongoing public sector infrastructure construction. Sponsorship packages and event tickets for this exclusive dinner and networking event are now available. Contact Elena Langlois (elena@actualmedia.ca) for more information. The 2016 event sold out a month early—so act quickly. top100projects.ca

GREAT LAKES AND ST. LAWRENCE GREEN INFRASTRUCTURE CONFERENCE, MAY 31-JUNE 2, 2017, DETROIT, MICHIGAN

This conference will draw up to 1,000 engineers, landscape architects, water quality professionals, government officials at the local, state, and federal levels, developers, planners, academia, drain and road agencies, conservation and non-profit organizations, and interest groups from around the Great Lakes basin in Canada and the U.S. More than 80 speakers focus on using green infrastructure across the landscape with a primary goal to protect the surface waters in the Great Lakes region. The last day of the conference offers tours of green infrastructure projects across Detroit. bit.ly/GLGInfra
Construction underway to add a fourth lane to the Peace Bridge.

Construction to add a fourth lane.

An aerial view of the Canadian plaza.

The customs commercial inspection lanes in the U.S.

The U.S. plaza showing widened approach.

PEACE BRIDGE AUTHORITY

- Buffalo and Fort Erie Public Bridge Authority owns and operates the Peace Bridge crossing the Niagara River connecting Buffalo, New York, and Fort Erie, Ontario.

- The Peace Bridge opened in August 1927.

- Commonly known as the Peace Bridge Authority (PBA), it is a unique bi-national compact entity created by special legislation in Canada and New York State, with the consent of the United States Congress. Five members of the board are Canadian and five are American.

- The PBA not only owns and operates the Peace Bridge, but also the Customs’ plazas on both sides of the border, and is the landlord for the Canada Border Services Agency and U.S. Customs and Border Protection.

- The PBA is financially self-sufficient through tolls and rental income from tenants including duty free stores and custom brokers on both sides of the border.

- The PBA hosts a NEXUS and FAST (Free & Secure Trade) enrollment centre on site.

- The Peace Bridge is a major trade and tourism conduit being one of the busiest border crossings between Canada and the United States with approximately six million vehicles crossing annually.

- Nearly 1.3 million trucks cross the Peace Bridge annually carrying $40 billion in goods traded between Canada and the U.S.

- The PBA is currently in the midst of a self-financed USD $187 capital improvement program to modernize border infrastructure and consists of several projects:
  - USD $10 million U.S. approach widening
  - USD $10 million bridge widening in Canada
  - USD $24 million expanded and renovated LEED-certified Customs & Border Protection commercial facility
  - USD $100 million complete bridge rehabilitation
  - USD $48 million U.S. Customs enhancements

- The PBA participated in a commercial pre-inspection pilot, where U.S.-bound trucks were processed in Canada prior to entering the U.S. The pilot was designed to test ways of expediting cross border trade, reducing congestion delays, and minimizing emissions from idling trucks. Full implementation requires legislation authority in both Canada and the U.S.

peacebridge.com
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Public opinion about Canada-U.S. relations are changing, but positive.

By Nik Nanos

The bromance between U.S. President Barack Obama and Canadian Prime Minister Justin Trudeau may be a fleetingly short moment in Canada-U.S. relations. The research suggests that the goodwill between the people of Canada and the United States remains steadfast, despite the musings of some politicians, and the periodic fanning of flames of Canada as a source of terrorists.

Nanos Research, in conjunction with the State University of New York at Buffalo, has completed year twelve of a tracking study of Canadians and Americans on the binational relationship. Overall, people in both countries, who regard each other positively, don’t consider goods or people as a priority to be checked at the border compared to other countries. They also recognize the importance of cooperation on big issues like energy policy. For example, less than ten per cent of Canadians or Americans think goods from each other’s countries should be inspected at the border. Both Americans and Canadians are about three times more likely to think goods from Mexico or China should be inspected.

More than eight out of ten Americans and Canadians think that developing an integrated energy policy is very or somewhat important. The irony in the tracking is that since the setback of the Keystone XL pipeline, the Canadian appetite for cooperation with the United States has started to trend upwards. The research suggests goodwill on a gamut of priorities ranging from the border and energy, to national security and fighting terrorism.
A RISE IN NATIONALISM

There is, however, a worrisome change. Directional sentiment on the desire to follow national interest, even if it conflicts with others, is at a 12-month high in both Canada and the U.S. Two of three Americans and Canadians agree or somewhat agree on placing national interest supreme. This has been in the low 50s for each country but now is cycling upward—perhaps for different reasons arising from the same event—the U.S. presidential race.

Under an Obama administration, Canadians were less intense in their pursuit of national interest. Fast forward to isolationist rhetoric from republican nominee Donald Trump, and we can see a preemptive heating up of sentiment for Canada to chart its own path in response to the potential for a future more isolationist mood in the U.S. The political reality is that Hilary Clinton will need to manage isolationist sentiment and counter Trump’s claim that, to “make America great again,” requires being more isolationist.

The risk for the Canada-U.S. relationship is one of unintended consequences. When trade agreements with Asia are cast into doubt this affects all trade agreements, and Canada risks being an unintended casualty of American domestic politics. When the Americans thicken the border to stop people they do not want entering the U.S., Canadians suffer.

THE NAFTA ANTIDOTE

The clearest antidote to this is to focus on delivering on the promise of the Free Trade Agreement and its successor agreement the North American Free Trade Agreement. At the center of those agreements was the idea of prosperity and job creation within as North America takes on a highly competitive world. Our response to the Asian Tiger and a unified Europe was to create a prosperity sphere based on the movement of people, goods, and investment between North American partners. In that respect, the North American project continues to have a significant positive upside but remains unfinished business.

Nik Nanos is the chairman of Nanos Research, a research associate professor at the State University of New York in Buffalo, and a global fellow at the Woodrow Wilson International Center for Scholars in Washington D.C.

The full study can be found online at bit.ly/2016-CanAm-Tracking
Milwaukee's identity is synonymous with water. When the city was settled more than 150 years ago, it was because Lake Michigan and its tributaries provided fresh water and transportation waterways to lands throughout the Great Lakes and beyond. The name Milwaukee (originally Millioki) literally means "gathering place by the waters" according to the Algonquian First Nations. And while the thriving port town of the mid-1800s has evolved into a metropolitan port of knowledge anchored in manufacturing know-how, water still provides a central reason to gather.

RIPPLE EFFECT

Milwaukee leverages it's most valuable resource, water.

BY JULIE CIGALLIO GRANGER
IT ALL STARTED WITH BEER

Early industries were dependent on both the quality and abundance of freshwater—most famously, beer! And while employment in the beer industry today is a fraction of what it once was, the brewing tradition remains alive and well. Miller Brewing (today MillerCoors) opened its first production facility in 1855 and today produces 10 million barrels of beer here each year. Wisconsin ranks 12th in the nation for breweries per capita, and the number of craft breweries statewide has nearly doubled in just the past four years.

AT THE CENTER OF GLOBAL FRESHWATER INNOVATION

Water, our greatest natural resource, remains as vital to our economy as ever. The region has one of the highest concentrations of water-related companies in North America, with nearly 200 firms involved in water-related businesses. Water-technology firms like Veolia, Pentair, Siemens, Badger Meter, A.O. Smith, and Rexnord all have a home in Milwaukee.

The Milwaukee Water Council is leading this unique industry cluster. The Water Council links together global water technology companies, innovative water entrepreneurs, government agencies, NGOs, acclaimed academic research programs, and some of the nation’s brightest and most energetic water professionals. The driving force behind this success is the spirit of collaboration and the shared commitment to finding innovative solutions to critical global water issues.
MANUFACTURING TRADITION ALIVE AND GROWING

The economy in the Milwaukee Region today is diverse, but advanced manufacturing remains a core driver industry. Sixteen per cent of our workforce is employed in the manufacturing sector, the second highest concentration among major metro areas.

The region leads the nation in the production of industrial controls, x-ray equipment, steel foundry parts, and mining machinery. Two years ago, the region was one of 12 in the nation to be included in the federal government’s Investing in Manufacturing Communities Partnership, in recognition of our manufacturing strengths. A region-wide effort is encouraging our small and medium-sized manufacturers—and service companies as well—to develop international export strategies. The Milwaukee Region’s economic future depends on a focused and aggressive global trade and investment agenda that better positions the region’s firms to compete in world markets.

In addition to water technology, two other exportable cluster industries are especially well-positioned for future growth—food and beverage manufacturing and electrical power and controls. Each is supported by an industry-led collation that is harnessing the power and potential of high concentrations of companies, talent, research, and entrepreneurs.

TALENT IS OUR COMPETITIVE EDGE

The success of our economy is wholly dependent on educated, adaptable, and highly skilled talent. The Milwaukee Region’s workforce has always been one of our greatest advantages, and we are working to keep it that way.

The Milwaukee 7 (M7) Economic Development collaboration (representing the seven counties of Southeast Wisconsin) is dedicated to making the region globally competitive, supporting high-value employment, and fostering...
an exceptional quality of life. Developing our current and future talent is central to this mission.

The Milwaukee 7 Talent Partnership works to align regional export-oriented companies with the right talent at the right time. This work includes providing a rapid response when companies need to fill immediate openings, but also focuses on long-term solutions by improving the quality of the labour pool.

M7 is linking students, schools, and companies through career-based learning experiences. The process involves both hands-on activities and virtual connections where students can explore skills and interests and meet mentors at local firms. The group is also increasing the number of apprenticeships and internships with businesses while tackling the challenge of attracting a new generation to high-tech manufacturing careers.

**THIS PLACE WE CALL HOME**

A hometown is much more than a job, a company, or an industry. Today there is a palpable momentum in Milwaukee. Office towers, apartment buildings and condos, and a new downtown entertainment and sports arena are changing the Milwaukee skyline more dramatically now than it has in the past 30 years. This development is catalytic as re-investment spreads into neighbourhoods and suburbs.

Our cultural and entertainment amenities enrich our lives—from world-class museums and parks to a restaurant scene that is second to none. Many of the events, attractions and recreational activities that bring our community together center around our Lake Michigan shoreline and our inland lakes and rivers. Summerfest, an annual 10-day music festival is the largest in the world, attracting nearly one million visitors each year. The festival grounds (along Milwaukee's lakefront) are also home to cultural celebrations held almost every weekend throughout the summer.

At the end of the day, the natural beauty of our lakeshore anchors our community and remains as much of a gathering place for us as it was for our earliest settlers. Plan a visit or plan a move. Jump in, the water's fine!

Julie Cigalio Granger is the Senior VP of the Metropolitan Milwaukee Association of Commerce.

Choosemilwaukee.com
VISITMilwaukee.org
Discovermilwaukee.org
More than 80 per cent of the world’s commodities are moved around the globe in ships. In doing so, the industry also transfers three to five billion metric tons of ballast water every year that may contain non-native species—posing serious risks to industry, consumers, and the environment.

In early September, Finland ratified the global environmental standard for ballast water treatment, governed by the International Marine Organization. The decision thrusted the world’s shipping industry towards measures that are intended to prevent the spread of these hidden invaders. Yet, the United States remains at odds with the rest of the world, including Canada, on these standards. Now Canada, with its many partners and stakeholders, must quickly reconcile the divergence in the science to harmonize with its biggest trading partner.

**GHOST IN THE SHELL**

On a summer evening in 1988, a group of researchers from the University of Windsor boarded a small vessel on Lake St. Clair to do a local survey of freshwater species. Upon inspecting a bucket of sediment, a young graduate student discovered an unknown species that would soon become so prolific throughout the Great Lakes that it would threaten water quality and health of Great Lakes fisheries, and would cost businesses, governments, and landowners over $100 million annually.

The tiny creature in the bucket was none other than the zebra mussel. It became the wake-up call for Canadian, U.S., and governments worldwide concerning the dire consequences of letting non-native species invade their waters. Shortly afterwards, Canada and Australia brought their concerns to the attention of the International Marine Organization (IMO), and thus began a 30-year process of complex negotiations among IMO nation states to adopt global regulations to address ballast water transfers.

**IMO VERSUS THE U.S. COAST GUARD**

For nearly 60 years, the IMO has convened member nations (now totalling 170) in order to promote marine safety and pollution
prevention, as an established body of the United Nations. Until this year, they had only adopted guidelines to prevent the spread of invasive species, but had fallen short of legally-binding rules for ship owners. The stalemate occurred when the U.S. Coast Guard split its principles with the remaining IMO nations in 2009/2010.

The U.S. Coast Guard’s intentions with their independent principles was to ensure the standard was more robust and reliable—to prevent some countries from exploiting loopholes while gaining certification.

Christian Williamson, a senior VP of London, Ont.-based Trojan Technologies—a company with skin in the game because its ultra violet light-based ballast water technology has been approved by the IMO—said that many of the Coast Guard’s arguments have been prudent and welcomed. In fact, Trojan has proceeded to adopt many of the measures with their own testing of the equipment to ensure it will meet the highest standards. However, on one very important matter, the U.S. stands apart from all other nations. The split is particularly troubling for the shipping industry, because all ships will now be required to implement a ballast water management plan that is consistent with the IMO rules the next time they dock for maintenance (within five years). The U.S. position makes it very difficult for ship owners to determine how they can be compliant.

To ensure filtration reliability, Trojan tested its technologies using mixtures of water and marine mud from around the globe to mimic the most challenging of potential treatment demands.

TECHNICAL DIFFERENCES: ALIVE VS. Viable

The sticking issue for the two approaches lies in a particular test method that is needed to quantify the effect of water treatment methods on phytoplankton (the class of single cell microbes that are 10-15 micrometres in size). To certify ballast equipment, the IMO has utilized a method known as MPN (Most Probable Number), whereas the U.S. Coast Guard has recommended another method known as Vital Stains method. Each is used to determine whether new treatment technologies are “capable of removing, or rendering harmless or killing organisms,” or in the case of the IMO, whether the organisms are still “viable,” meaning, able to reproduce.
“The position that the U.S. has had is, ‘you need to kill the organisms,’” said Williamson. For Trojan Technologies, this detail is crucial because Trojan’s UV system does not actually kill the organisms instantly; rather, it damages their cells so that they can no longer reproduce. The MPN method measures an organisms’ ability to reproduce. “Organisms can’t invade, if they can’t reproduce,” he said.

Matthias Voigt is the research and development director of the Cathelco R&D Centre in Germany—a research and test facility for ballast water management systems. Voigt says it is important to maintain the distinction between arguments regarding “viability” of organisms and those about the analytical tools used to test them. “If we really focus on the analytical tools discussion, the MPN method is at least as accurate as the staining [Vital Stain] method, when it comes to analyzing the 10 micrometres to 50 micrometres size class of organisms in ballast water discharges.” Voigt added, “From a biological point of view, the MPN method allows for the analysis of a greater diversity of treatment effects, compared to the staining method.”

For the shipping industry, the disparity in methods could be crippling. Installing a new ballast water treatment system is one of the most expensive pieces of equipment on the ship. Depending on the vessel size, a system can cost between $200,000 to $3 million. Non-compliance with the U.S. will also affect future re-sale opportunities. The potential consequences are so costly that the issue was discussed at a U.S. Congressional hearing in late April 2016.

As of Sept. 12, more than 5,000 vessels had procured ballast treatment equipment. Yet, the estimate of the number of ships that will now be rushing to respond within five years of when the decision is made is something in the magnitude of 30,000 to 50,000 vessels.

**A COMPACT SOLUTION**

Trojan Technologies, and its subsidiary Trojan Marinex, was the first company in the world to submit its 3,000-page application for certification from the Coast Guard in March 2015. Having undergone trial testing over three years and its own peer-reviewed research, Trojan was one of three companies to submit, including a Swedish firm, Alfa Laval and a Danish firm, DESMI. The company’s unique position in the world of ballast water treatment traces back to 1976 when they began working with UV for drinking water and wastewater treatment. This history has been instrumental to its current position in the market because they have been aggressively improving the treatment capacity,
energy efficiency, and decreasing the footprint of UV systems to meet the needs of municipalities.

"You are treating as much water as a medium sized city—in terms of flow rate, about the same as the City of London," said Trojan’s president and CEO, Marv DeVries. Trojan has developed a system that uses less than half of the power of any other UV system on the market. As well, using UV eliminates the need to handle and dispose of many chemicals—an advantage for public safety, the environment, ballast corrosion, and other limiting factors.

The company has also been striving to advance the science behind treatment methods, going beyond what most of its competitors have done, by testing in water conditions across the world, in a variety of ships, under numerous conditions. Trojan sought the expertise of John Cullen, a professor in the Department of Oceanography at Dalhousie University who is one of the world’s leading experts on the effects of UV on the marine environment. Cullen recently published research that would suggest that the MPN method is more robust and preferable to the Coast Guard’s vital stains method. In spite of this, the company was denied U.S. Coast Guard certification, on account of the MPN/Vital Stains quandary.

“Canada is a very important partner in this process because we share a border,” said DeVries. “The Great Lakes are ground zero for the issue of invasive species, and as such, Canada is obviously trying to maintain the relationship with the U.S. Coast Guard.” While Trojan, along with many other stakeholders in the world, are working closely with policy-makers in the United States to help reverse the U.S. Coast Guard’s position on the MPN method, their hope is that the Canadian government will also show increased public support.

The Government of Canada’s response (as of June 2016) was that, “Canada is calling for U.S. legislators and U.S. federal and state administrations to maximize compatibility between the implementation of U.S. requirements and the Convention. Transport Canada officials also work closely with their counterparts at the U.S. Coast Guard and the Environmental Protection Agency towards this goal.” But greater pressure may be needed.

Now that the Convention has been ratified, the stakes for the industry and future trade relations are high and the pressure to harmonize is greater than ever.

In June, Trojan Marinex received the 2016 Outstanding Private Sector Achievement award from the Reduce Risks from Invasive Species Coalition.

Katherine Balpataky is Current magazine’s associate editor.
The call for change has been out for many years, but with the internationally attended United Nations Climate Change Conference in Paris last year, many countries have finally pledged to reduce their carbon footprint. This commitment to real change is not just a nice idea, it’s a necessity. VIA Rail signed the COP21 pledge, an agreement to reduce overall GHG emissions by 30 per cent by 2030 (compared to 2005). For members of the International Union of Railways, such as VIA Rail, this entails a more aggressive promise of a 50 per cent reduction in carbon emissions by 2030 (compared to 1990). Although the 2030 target is an aggregate pledge of an average over all rail companies in the UIC, VIA Rail is committed to reaching this goal individually. Based solely on our own initiative, we have already achieved a reduction of 41.1 per cent emissions compared to 1990.

The transportation sector is the biggest contributor to air pollution in our country after the oil and gas sector. In 2014, it was responsible for 24 per cent of national emissions, and of that 52 per cent was specifically attributable to the use of personal vehicles. Right now in Canada, mobility (especially inter-city) means pollution, and we are not about to stop moving. Given this, our only choice is to reduce the ratio of mobility to emissions—and that comes down to personal preference—specifically, what mode of transport we choose. Convenience is key, and the numbers show that people clearly consider their car to be the most convenient option. To address the negative effects of using a personal vehicle, deterrents such as highway tolls and extra tax for less efficient cars have been introduced as penalties in hopes that by charging people for making “bad” choices, they will stop doing so. So far, it hasn’t worked.
But how about the flip-side: creating alternatives that are just as convenient, seamless and easy, and make “doing the right thing” irresistible?

MODERNIZING THE BUSINESS

One way that governments can do this is to fund efficient, reliable, fast, and fluid transportation systems.

Thanks to the almost $1 billion investment by the Government of Canada in 2007, we allocated $140 million to modernizing our trains through a complete overhaul of our locomotives and reorganization of the fleet to improve efficiency. We are now deploying in-house built and patented technology to assist our locomotive engineers in managing our fuel consumption even more. For example, in 2012 we introduced a new, innovative telemetry Wi-tronix system to improve train handling behaviours. We provided training for our locomotive engineers on ways to reduce train idling and improve fuel efficiency. This successful initiative won VIA Rail a Mercuriade award, a competition organized by the Federation of Chambers of Commerce of the province of Quebec to highlight the innovation, ambition, entrepreneurialism, and performance of Quebec businesses.

As a result of these and other initiatives, VIA Rail has seen a reduction of our fuel consumption and GHG emissions by 27 per cent and 25 per cent respectively over the past six years. Doing so meant that we met or exceeded the rail industry, the Canadian and global commitments to GHG emission reductions ahead of schedule. Furthermore, in April we published our first Sustainable Mobility Report, on the theme of Laying the Groundwork for the
Generations to Come. It reflects how we view our role in shaping Canada’s evolution towards a more sustainable future. The report maps out what we have accomplished in terms of sustainability to date as well as our goals moving forward.

VIA Rail’s passenger transportation service connects more than 400 communities across Canada, through our inter-city, regional, and transcontinental trains—enabling Canadians to reliably, comfortably, and conveniently become more mobile, and reach their destinations in a safe and environmentally responsible way.

Fostering inter-modality is a key part of VIA Rail’s strategy to encourage more people to leave their cars at home and take the train. Inter-modality partnerships make it easier for passengers to get to the station and to their final destinations, so their travel experience is convenient and seamless. By partnering with motor coach lines, airlines, shuttle and commuter services, and travel agencies, we make the entire travel experience more productive and less fuel consuming overall.

**INTER-MODAL PARTNERSHIPS**

In 2015, we continued to expand our inter-modal partnership network. We partnered with UP Express (which links Toronto’s Pearson International Airport to Union Station) to make it easier for passengers from outside of the GTA to connect to Canada’s busiest airport. We extended our inter-modal service with Montréal’s commuter train service, AMT, to include the line from Mascouche, Québec to Montréal’s Central Station, and partnered with a Discount Car Rental in Ottawa to pilot their innovative kiosk technology project and test out door-to-door mobility solutions. This year we extended the kiosk technology to six more stations. These partnerships bring the train to new markets and make it an attractive option for intercity travel.

The strides we have made towards sustainable mobility are impressive, but we have reached a plateau within the constraints of our current operating structure. We share our infrastructure with freight trains and therefore do not have full control of our schedules or our reliability (on time performance). This is why we started looking for solutions outside of our system and asking what could be accomplished environmentally and financially if the constraints were lifted.

Our latest plan is to build a dedicated passenger rail corridor, on electrified rails, within the busiest Toronto-Ottawa-Montreal corridor to start. The plan is supported by both the federal government’s Budget 2016 and the latest Canada Transportation Act review report. This is a project that would lead to a reduction of 98 per cent of GHG compared to our current (already reduced) emissions. It would make travelling by train so convenient, conservative estimates show that there would be 5.5 million fewer car trips per year and that our ridership would triple. As such, it would also relieve road congestion, reduce in large part, the annual subsidy provided to VIA Rail by the Government of Canada, and create thousands of jobs for Canadians.

Passenger rail is a vital part of the climate change solution for Canada. It provides an accessible and affordable alternative to cars and supports the necessary shift we need to make towards a more sustainable transportation system. To help encourage Canadians to leave their cars at home and take the train, we must first meet the needs of our passengers by providing a reliable service with more frequent and shorter trips. These needs can only be met through greater access to rail infrastructure in areas where markets can justify dedicated passenger rail corridors.

In April 2016, press secretary Brook Simpson, from the Office of the Minister of Infrastructure and Communities confirmed that, “[The government wants]…to support economic growth that is clean and inclusive. And our government believes that economic growth, social inclusion and a solid climate change agenda do not compete—they complement each other.” We couldn’t agree more.

It is very encouraging that in its 2016 budgetary statement, the government references our dedicated track strategy and grants Transport Canada the necessary resources to support the in-depth assessment of VIA Rail’s high-frequency rail proposal. As the only national passenger rail service, VIA Rail plays an important role in achieving Canada’s vision for a more sustainable transportation system that protects the environmental legacy of Canada for future generations.

As Canada’s only national passenger rail service, VIA Rail plays an important role in achieving our nation’s vision for a more sustainable transportation system that protects the environmental legacy for future generations.

Yves Desjardins-Siciliano is the president and CEO of Via Rail Canada.

More information about VIA’s dedicated tracks project and our sustainability report can be found online at viarail.ca.
From Partnership Flows Prosperity

CGLR is pleased to be hosting the third Great Lakes Economic Forum in Detroit-Windsor in 2017. The Forum, launched in 2015, is a venue for leaders from around the region to share ideas and insights that will help shape economic policy, boost the region’s competitive edge, and secure its long-term success in a borderless global economy.

WHY ATTEND?
Over 300 key players from government, business, and academia in the Great Lakes and St. Lawrence Region.

The region’s GDP is USD $5.8 trillion, or roughly 20% of combined U.S. and Canadian economic activity.

The region, home to 107 million people, supplies 46 million jobs, or nearly 30% of the combined U.S. and Canadian workforce.

PARTICIPANTS BY ECONOMIC SECTOR

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greatlakeseconomicforum.com
The PRICE of DISASTER
Is Canada prepared for the effects of climate change?  BY CRAIG STEWART

Whether we're seeing damage caused by fire, water, wind, or ice, there is growing evidence that Canada is paying a very high price for the devastating effects of climate change through more frequent and severe natural disasters. Flooding, in particular, is building a reputation as Canada's most frequent and costliest natural hazard.

Consumers, business leaders, and representatives from all levels of government are directly experiencing the economic consequences of natural disasters. Financial resilience of Canada's local communities must be at the forefront of any climate adaptation strategy, as they bear the bulk of the costs. Any climate adaptation framework should engage the insurance industry together with consumers and all orders of government to reduce this burden.

A stark example of the cost of disasters is the recent wildfire in northern Alberta, which caused an estimated $3.6 billion in insured losses and has the dubious honour of being the largest loss of insured property in Canadian history. In Ontario, there have been five extreme weather events in 2016 alone. In the past decade, there have been 30 such events, up from 15 the decade before. Federal disaster relief spending jumped from an average of $37 million a year in the 1970s to $608 million a year this decade, mostly driven by flooding.

Between 1970 and 2014 there have been more than 200 disasters in Canada that would have qualified for federal disaster compensation. Because Canada has no flood insurance strategy, the $6.8 billion in disaster recovery costs incurred by the federal government is ultimately borne by taxpayers. Seventy-five percent of that, or $5.2 billion, is flood related.

Right now, federal financial assistance for floods and other catastrophes is provided through the Disaster Financial Assistance Arrangements (DFAA) program, which is operated by Public Safety Canada and is budgeted at $100 million annually. The DFAA program supports Canadians in times of emergency. But the federal Parliamentary Budget Officer (PBO) is blunt in his assessment of the program: The current fiscal framework understates, in a material way, the likely costs of severe weather to citizens.

The PBO's 2016 report estimates that over the coming five years, weather events linked to climate change will cost the government over $900 million annually. That's a staggering increase from $37 million a year 40 years ago. And that $900 million is far in excess of what the government has currently set aside to deal with such events. Canada needs a better strategy to deal with these rising costs.

Fortunately, the political will for a new strategy exists. This past July, when Canada's premiers and territorial leaders assembled in Whitehorse for their semi-annual Council of the Federation meeting, they put natural disaster response and recovery squarely on the table for discussion. Following that meeting, they issued a communiqué with a specific call for increased funding for the DFAA program. The meeting's discussion also prompted premiers to direct their ministers responsible for emergency management to form a new disaster response and recovery model and to create a modernized Emergency Management Framework for Canada in conjunction with the federal government.
Canada’s property and casualty (P&C) insurance industry has taken the lead on updating flood hazard mapping, and Insurance Bureau of Canada (IBC), on behalf of Canada’s P&C insurers, has been working with a global leader in flood mapping to develop a Canada-wide model that uses the best local climate and geospatial data available.

As the trade association that represents Canada’s home, car, and business insurers, IBC is calling for the development of a National Flood Strategy within the context of Canada’s broader national Climate Strategy. As part of our 2016 proposal to the Federal, Provincial and Territorial Working Group on Climate Adaptation and Resilience, IBC called for a National Flood Strategy that:

1. Transfers risk from taxpayers (DFAA) to insurance policyholders (private industry);
2. Enhances risk identification and awareness by expanding the federal government’s National Disaster Mitigation Program (NDMP);
3. Expands the definition of green infrastructure to include natural systems;
4. Educates and empowers homeowners to mitigate risk; and
5. Amends the National Model Construction Code to include climate and disaster resilience.

Financial resilience against natural disasters is within our reach. An array of organizations such as the INTACT Centre for Climate Adaptation (University of Waterloo), Ducks Unlimited, Fraser Basin Council, the University of PEI Climate Lab, and the Institute for Catastrophic Loss Reduction all have innovative solutions to the flood problem. We now need government leadership to weave this thinking into a national strategy.

But to keep moving forward, we must start by educating Canadians about the risks of flooding. Together, government and private industry can help Canadians, especially those in high-risk areas, understand that floods are not highly unlikely and are worth preparing for. When Canadians truly understand the economic effects of a catastrophic flood—before it happens—they’ll be more likely to take action to protect their homes and communities. And isn’t that something we want no matter where we live?

Craig Stewart is the VP of federal affairs for the Insurance Bureau of Canada.

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Bruce Power generates over 30% of our electricity at 30% below the average residential price. We provide Ontario families and businesses with a reliable source of clean electricity that not only provides low-cost power, but has played a key role phasing out and keeping Ontario off coal. This has led to fewer summer smog days and healthier communities in recent years.

While doing this, we are also the source of thousands of jobs throughout the province and billions of investment into our economy and infrastructure. We recognize we are part of a balanced, clean supply mix and we are committed to continuing to do our part to meet the energy needs of families and businesses.

BrucePower Nuclear: Part of a Modern, Clean Electricity Future

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Our borders have changed since 9/11. Some of these changes were common sense steps, while others made life incredibly difficult for border communities.

As a Vermonter, and a northern border senator, I appreciate the partnerships and opportunities we share with Canada. In Vermont, we look to our Canadian neighbours as joint stewards of our shared communities. While both nations strive to ensure a secure border, the ties between Canada and our northern border states—from Alaska and Washington, to Vermont and Maine—run deep. We rely on, and strengthen each other, through trade, commerce, and tourism. This is why I have introduced The Promoting Travel, Commerce, And National Security Act legislation that will allow for full implementation of the expanded U.S.-Canada preclearance agreement.

Preclearance facilities allow travellers to pass through U.S. Customs and Border Protection (CBP) inspections in Canada, prior to travelling to the United States. Preclearance relieves congestion at U.S. destination airports, facilitates commerce, saves money, and strengthens national security. The United States currently only stations CBP officers in eight select locations in Canada to inspect passengers and cargo bound for our country. The U.S.-Canadian agreement will expand U.S. preclearance facilities in Canada in the land, rail, marine, and air sectors.

But to fully implement this agreement, the Department of Homeland Security requires specific, narrowly-tailored legislation. CBP officers assigned to preclearance locations operate with law enforcement authorities and immunities as agreed upon by the United States and the host country’s government. Under the new preclearance agreement with Canada, the United States secured the right to hold our officials accountable if they commit crimes on the job while stationed in Canada.
thereby precluding prosecution by Canadian prosecutors. But in some cases, the United States may lack the legal authority to prosecute U.S. officials because many federal crimes do not have extraterritorial reach. The bipartisan Promoting Travel, Commerce, and National Security Act would ensure that the United States has the legal authority to hold our own officials accountable if they engage in wrongdoing abroad in Canada. Our legislation will allow for full implementation of the expanded Canada preclearance agreement.

Our borders have changed since 9/11. Some of these changes were common sense steps, while others made life incredibly difficult for border communities. Since 9/11, I’ve worked in the Senate to secure our borders and facilitate a more efficient flow of travellers and goods. This legislation will promote both of these goals. By stationing CBP personnel at the point of departure, screening occurs before a person boards a flight—and eventually before rail passengers board a train—increasing our ability to prevent those who should not be flying to the United States from doing so. In 2015, preclearance stopped more than 10,700 inadmissible travellers worldwide before they left foreign soil.

We also know that our economy continues to recover. Canada is the United States’ largest trading partner. In the first 11 months of 2015, $85 billion in commerce moved between the United States and the Province of Quebec. That is important trade—in business, energy, machinery and aerospace products, and agriculture—that improves the economy of the northern border regions.

That is why it is so important to pass this legislation and allow the Canadian preclearance agreement to move forward. A bipartisan coalition of members in the House of Representatives have introduced companion legislation. I am also grateful for the support of 12 senators, many of them also from northern border states. Both the United States and Canada have committed to passing the legislation necessary to move forward with this agreement because of our shared economic interests, environmental goals, and a commitment to the safe and efficient travel of our citizens. I am committed to working with members of Congress to enact this legislation, this year.

Patrick Leahy is the United States Senator for Vermont.
To say the Great Lakes-St. Lawrence Region is a North American economic hub is an understatement. The region’s GDP represents around 30 per cent of the combined U.S. and Canadian economic activity, supplying an incredible 46 million jobs.

That is why the mobility of tradespeople within the region is so integral to its continued success and future economic growth. The Ontario College of Trades (College), as a self-managed regulatory body, is in a unique position to help. Our mandate is to modernize and promote the skilled trades and protect the public interest. This includes creating and supporting streamlined processes that allow tradespeople to move not only inter-provincially, but also globally.

**PARTNERSHIPS ARE KEY TO WORKFORCE MOBILITY**

Process should not hinder economic development. Our work in reducing bureaucracy around skilled trades mobility in Ontario and Canada is an exemplary model that I think we can extend internationally. We need to keep in mind that economic development is a two-way street. If we work to make a more streamlined process in Ontario, we need to have a similar system south of the border so that both countries can benefit from our respective pool of skilled trades talent.

**TRANSFERABLE SKILLS**

One way the College is helping build the skilled trades workforce in the province is through our Trades Equivalency Assessment, commonly referred to as “TEA.” This is a straight-forward system that assesses the skills and prior work experience of workers trained in other provinces and outside the country based on one of more than 150 Ontario apprenticeship programs. If someone meets all the training requirements of that
apprenticeship, he or she will qualify to apply for certification in that trade to work in Ontario.

SKILLED TRADES SHORTAGE

It’s no secret that Canada is facing a skilled trades shortage. Over the next few years, we will continue to lose hundreds of thousands of tradespeople due to retirement. For example, a recently released BuildForce Canada report says the country’s construction industry, alone, will need about a quarter of a million workers in the next 10 years. This includes carpenters, electricians, plumbers, hoisting engineers, and more.

This isn’t a problem unique to Canada. According to a recent Deloitte report, over the next decade, the United States’ skills gap is expected to result in two million manufacturing job vacancies. Preparing for the anticipated skilled trades shortage will require strategic partnerships. The Windsor-Detroit crossing is a good example of how these partnerships need to work. It’s the busiest commercial trade crossing between the U.S. and Canada. Almost one quarter of all the goods moving between the two countries pass over the existing bridge and through the tunnel connecting Detroit and Windsor. These projects benefit everyone and illustrate why we need to think and act collectively.

BUILDING A FUTURE WORKFORCE

At the College, we have done extensive work to help modernize the trades. We make sure curriculum and apprenticeship standards are up-to-date and reflective of the changing technology in the industry. This means apprentices that complete their programs now enter the workplace with the most current knowledge of industry and safety standards.

Promoting a more flexible workforce is an easy sell, but what we do require is a strong working group, including experts on both sides of the border, to find solutions that will benefit our shared economies. Think of the ripple effect: when one economy is thriving, we are all thriving, and we can only benefit more if we share this knowledge, skill and workforce we are all so proud of.

David Tsubouchi is the registrar and CEO of the Ontario College of Trades.

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The 2016 U.S. election season has been an epic distraction, and many have missed a major effort by U.S. President Barack Obama and Canadian Prime Minister Justin Trudeau to make progress on longstanding issues in the U.S.-Canadian relationship. The next occupant of the White House will inherit the momentum of these efforts, as well as some important unfinished business.

With the notable exception of the Keystone XL pipeline issue, which dragged on too long and ended unsatisfactorily for nearly everyone involved, Obama has an impressive record in Canadian relations. He coordinated with Ottawa on the 2009 stimulus spending and the financial rescue of General Motors and Chrysler, agreed to a northern border strategy distinct for U.S. policy on the southern border, set up the bilateral Beyond the Border Working Group, and the U.S.-Canada Regulatory Cooperation Council. President Obama was a steady supporter of the Gordie Howe International Bridge, without which the project might not have overcome some of the hurdles that have delayed it.

On a daily basis, the U.S. president is like the fire chief of the U.S.-Canadian relationship, and gets involved only occasionally. Just about every department and agency of the federal government works with Canadian counterparts on a regular basis, though, and the interest and support of the president is necessary for these contacts to result in tangible benefits for citizens and businesses in both countries.

But the things that happen day to day in the U.S.-Canadian relationship matter a great deal to the citizens, communities, and businesses of the Great Lakes region. Come January, how can the 45th president of the United States be engaged on these routine but important issues?

Historically, the answer has been that stakeholders in the relationship speak out and draw attention to issues and priorities for the United States and Canada. Since most presidential candidates do not make campaign promises or issue policy paper related to Canada, they are open to what stakeholders tell them matters.

Last June in Columbus, the Ohio State University hosted a meeting of stakeholders in good U.S.-Canadian relations from both sides of the border, including regional chambers of commerce as well as major employers and representatives of state and provincial governments. Together, they drafted a “Columbus Statement on Canada-U.S. Relations” that sets forth a set of principles for the management of the relationship that stakeholders on both sides of the border felt should be respected by the two governments.

Urgent action is needed to nurture and strengthen the U.S.-Canada relationship.  

**BY DR. CHRISTOPHER SANDS**
The most basic points in the statement are that:

- the two countries are friends because their citizens are friends (and governments do well to respect that and support it); that the countries have grown interdependent and it is no longer possible for governments in one country to ignore the potential impact of their decisions on people in the other country;

- despite the obvious differences between the two countries, governments should work together as equal partners with no one dominating; and,

- we all respect the rule of law in our relations, playing fair and not hardball.

The support of stakeholders should be enough to keep the momentum of the Obama-Trudeau relationship going. The two leaders have used the pomp of Trudeau’s visit to Washington in March and Obama’s address to Parliament in Ottawa in June to give a boost to officials working on dozens of bilateral issues in the final months of Obama’s term. Success is not guaranteed, and three types of threats are looming between now and the next president’s inauguration.

The first is a bilateral dispute that could jeopardize progress in other areas and generate ill will. Softwood lumber could become that dispute. The abundance of Canadian forestland gives Canadian lumber a cost advantage over U.S. lumber, and some U.S. firms routinely seek trade protection from cheaper Canadian imports. A trade agreement expired in October 2015 and a one-year moratorium on countervailing duty action will expire roughly one month before the U.S. election. The two sides have been working to avert a trade war, but if the dispute erupts the next administration will have to cope with it before the stakeholder agenda can gain attention in the White House.

A second threat could come from an international crisis that takes all of Obama’s time and attention, or that of his successor. Because U.S.-Canadian relations are normally good, U.S. presidents will naturally ignore them...
when a big problem arises elsewhere. A terrorist attack, hostile actions by Russia or China, or a financial market jolt could preoccupy the president at the expense of a push for continued progress on the stakeholder agenda for relations with Canada. This is always a risk, and to some extent unavoidable, but having the Columbus Statement in front of both federal governments will promote a smooth return to these concerns when events permit.

It is the third potential threat that worries me the most: apathy. Many citizens in the two countries today no longer remember the tensions in the relationship over the Bomarc missile deployment, Canada’s decision to sit out the Vietnam War, or the fights over Canada’s Foreign Investment Review Act, National Energy Policy, and cultural protectionism. The Canada-U.S. Free Trade Agreement will have been in effect for 28 years on the next president’s inauguration day; NAFTA will be 23 years old. Institutions that have helped to guide the relationship, from the International Joint Commission (on stewardship of the Great Lakes) now more than a century old to NORAD (a joint air defense command that will turn 60 next year) are working so well that they are often forgotten.

Relations between Canada and the United States have been good for so long that we are all at risk of complacency, assuming that they will remain positive and mutually beneficial indefinitely. That would be nice if it was possible, but it is unlikely.

That is why some of the more prominent stakeholder groups developed the Columbus Statement.

While most signs point to continued goodwill between the two countries and steady progress on a constructive agenda that is mutually beneficial, by speaking out in favour of this relationship, stakeholders are performing a valuable function by signalling the importance of recommitment to good U.S.-Canadian relations to political leaders.

Once the din of this election year subsides, the new president and the 115th Congress should be able to hear these voices, and respond accordingly.

Christopher Sands, Ph.D. is a senior research professor and director at the Center for Canadian Studies at Johns Hopkins University School of Advanced International Studies.
SCM Insurance Services, Canada's largest independent, privately-owned insurance services provider, has announced the appointment of Scott Goodreau as CEO-USA. Goodreau's appointment is SCM’s first step towards taking its market-leading solutions to the United States. As a privately-owned provider of claims adjusting, third party adjusting (TPA), risk management, investigative, surveillance, risk mitigation, medical services, forensic engineering services, and risk intelligence, SCM has distinguished itself through innovative technology, expert staff and solid customer service. Visit scm.ca for more information.

Vertafore, the leader in modern insurance technology, has announced the appointment of Amy Zupon as its new CEO, effective October 3, 2016. She joins Vertafore from P2 Energy Solutions where she has served as CEO, and will succeed Jeff Hawn. Vertafore offers the broadest and most adaptable technology solutions to better prepare the insurance industry for digital disruption. For more information about Vertafore, visit vertafore.com.

Canadian Pacific Railway Limited has announced changes to its Board of Directors, including the appointment of Jill Denham and William R. Fatt, and the resignation of Bill Ackman. CP is a transcontinental railway in Canada and the United States with direct links to eight major ports, including Vancouver and Montreal. Visit cpr.ca to learn more.

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Fengate Capital Management announced the promotion of Pranav Pandya to CFO. Pandya will assume responsibility for global finance and accounting, and will provide oversight, leadership and direction for investor relations, corporate development, and strategic planning. Fengate Capital Management is a real asset investment firm that specializes in investment funds with a strategic on infrastructure, real estate, and private equity. The firm has over $2 billion in assets under management with significant experience in public-private partnerships, independent power projects, operating infrastructure assets, and real estate developments. Learn more at fengatecapital.com.

CGLR needs your help!

The Council of the Great Lakes Region, or CGLR, is a member-based organization that works to enhance collaboration and cross-border integration in the Great Lakes and St. Lawrence Region by bringing together stakeholders from the private, public, and not-profit sectors to advance effective, coordinated and broadly shared responses to the region’s common economic and environmental challenges.

Consider becoming a member and sustaining sponsor today.

Please contact info@councilgreatlakesregion.org for more details or visit councilgreatlakesregion.org
The Buffalo Niagara Medical Campus has two huge projects underway, set to be completed in 2017—a $375-million medical school and a $267-million children’s hospital. The campus will employ 20,000 people by 2020. Here’s what’s striking: in the 1950s, Bethlehem Steel, the second largest steelmaker in the United States, employed 20,000 people in Buffalo. The company went bankrupt in 2001.

The shift is representative of the rustbelt region as a whole. Not that long ago, industrial manufacturing was what made these cities great. But job outsourcing, manufacturing moving west, and increased automation almost ground the region to a halt. From the 1970s through the early 2000s, cities including Buffalo, Cleveland, Detroit, and Pittsburgh lost over 40 per cent of their populations.

Experts, such as Alan Mallach, a senior fellow at the Center for Community Progress in Washington, D.C., call them “legacy cities.” Mallach said the cities are distressed, but they also have rich historical, cultural, and physical legacies. It is on the basis of these legacies that these cities are beginning to revive themselves. They are “absolutely coming back,” said Mallach. Young people are part of the reason.

**DOWNTOWN PERKS**

Young adults are drawn to these legacy cities by the perks of living in a high density area, like plentiful dining and entertainment options, good transit systems, and—in these rustbelt cities—affordability. In Cleveland, there has been a 91 per cent increase in the number of 18-34 year olds with a college degree living downtown since 2007.

Living in these cities is much more affordable than major metropolises like New York or San Francisco. In 2015 Forbes reported that the prices for goods and services in Cleveland were 10.5 per cent below the national average.

New investments abound in these legacy cities. In Detroit, businessman Dan Gilbert, founder of Quicken Loans, has made revitalization of the downtown his pet project; his various development companies now own more than 80 buildings in the city. Most recently, he purchased two historical towers downtown, costing about $50 million together. He plans to renovate the buildings, turning them into mixed-use facilities. Besides its new medical facilities, Buffalo has a new, $900-million solar panel factory, called SolarCity, in the works along with the new HarborCenter at Canalside valued at $200 million.

Much of the revitalization in this region is thanks to two industries, “eds and meds.” Higher education and healthcare are driving employment and investment in places like Case Western Reserve University, the Detroit Medical Center, and the University of Pittsburgh Medical Center. These institutions are attracting high-skilled workers that contribute to R&D and innovation in the region.

With new investments, the jobs are sure to follow. Buffalo's unemployment rate fell to 4.4 per cent in May 2016—a rate not seen since 2007, according to the U.S. Bureau of Labor Statistics. Many other rust belt cities are also seeing rates back below pre-2008 recession levels.

Real per capita GDP in the five rustbelt states—Illinois, Pennsylvania, Ohio, Indiana, and Michigan—grew an average of eight per cent between 1999-2013, according to a June 2015 report by the Fraser Institute.

Slowly but surely, things are turning around. Whether the revival can be sustained is open to question. These cities in the rustbelt are starting to show their mettle. Perhaps it’s time to retire the “rustbelt” name?

Sarah Reid is a freelance journalist based in Toronto.
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Tom Prew, P.E.
Enbridge Senior Engineer
Responsible for Line 5, Superior, WI

The Great Lakes are an important resource, and that’s why it’s so important to do everything we can to keep them safe. From Autonomous Underwater Vehicles that traverse the lakebed observing the line to devices that travel inside the pipeline, our high-tech tools give us in-depth information on the pipe’s condition. And with around-the-clock monitoring, we keep a constant eye on the Straits crossing. But it’s more than the technology that keeps the line safe. It’s our team who lives here and works hard every day protecting the Great Lakes.

> Here are some of the ways we’re monitoring Line 5 under water:

• **Internal Monitoring** – The inside of the pipeline is monitored by “smart pigs.” These devices work like MRI machines traveling the length of the pipeline and can detect even the smallest of changes in the pipe’s interior over time.

• **External Monitoring** – Remote Operated Vehicles (ROVs) travel along the exterior of the pipeline to assess its condition and to ensure there aren’t any external hazards that could pose a threat to the line.

• **Quick response** – Monitored 24/7, the Line 5 pipeline can be shut off remotely in a matter of minutes if a potential problem is detected.

• **Always developing new technologies** – Together with Michigan Technological University’s Great Lakes Research Center, we are currently developing a new Autonomous Underwater Vehicle, and the Straits of Mackinac’s first modelling system for water currents.

Proud to be a part of the Michigan community for more than 60 years. Learn more about how we monitor Line 5 at enbridge.com/line5