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Border Barometer

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Cross-Border Institute, University of Windsor

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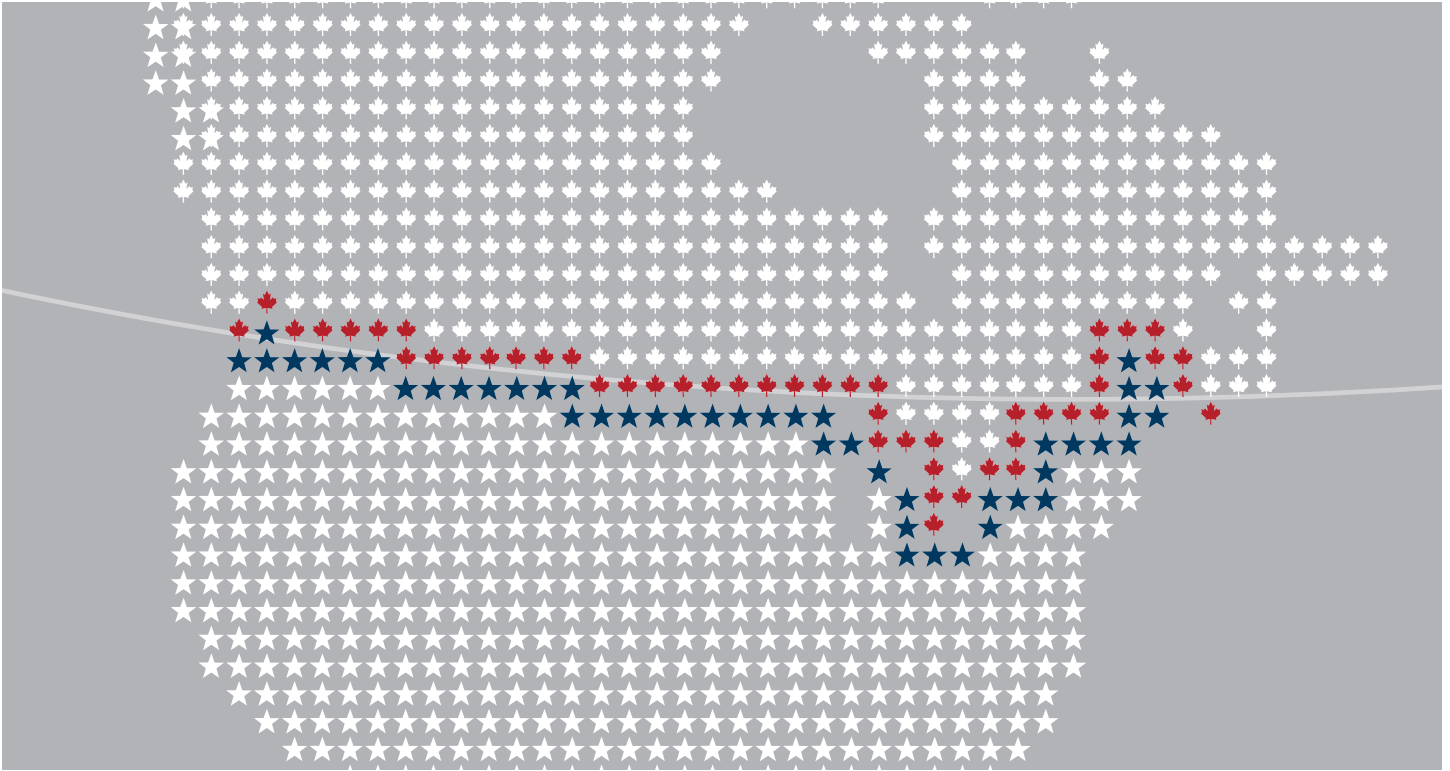
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BORDER BAROMETER



The well-being of North America is closely tied to how well the Canada-U.S. border facilitates interaction and ensures security. What happens at the border in different regions and how well does it work?



The State University of New York



RESEARCH INSTITUTE
WESTERN WASHINGTON UNIVERSITY



CROSS-BORDER
INSTITUTE

A BORDER BAROMETER

Running 5,000 miles between two of the world's most interdependent nations, the Canada-U.S. border plays an important role, directly and indirectly, in the lives of millions of North Americans. Whether as separator or seam, obstruction or conduit, the border influences a wide range of economic and social interactions. The precise influence depends on a variety of policies and the extent to which those policies facilitate the movement of goods, people, capital, and ideas while ensuring the individual and collective security of the two countries.

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COMMODITY COMPOSITION

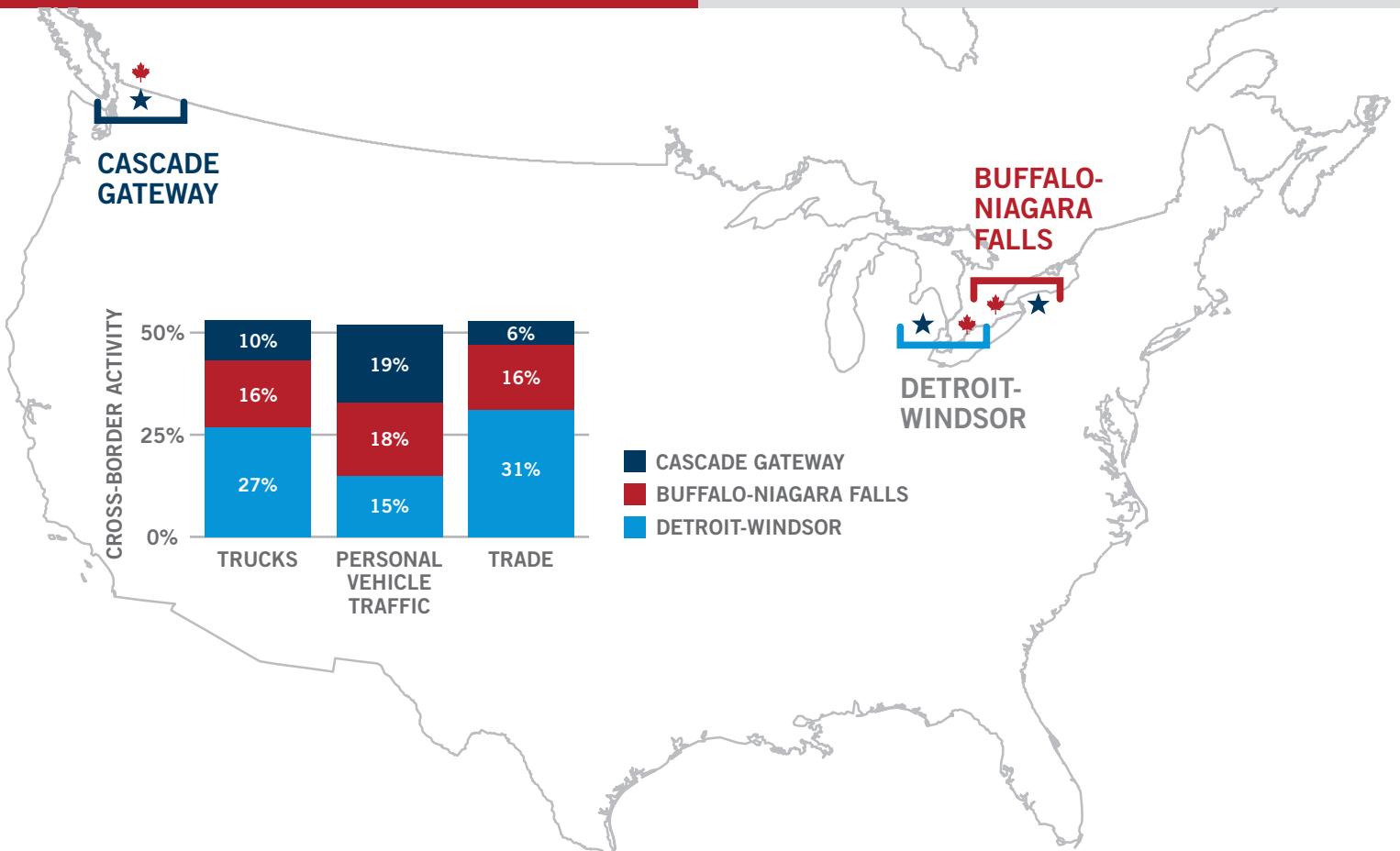
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INTRODUCTION

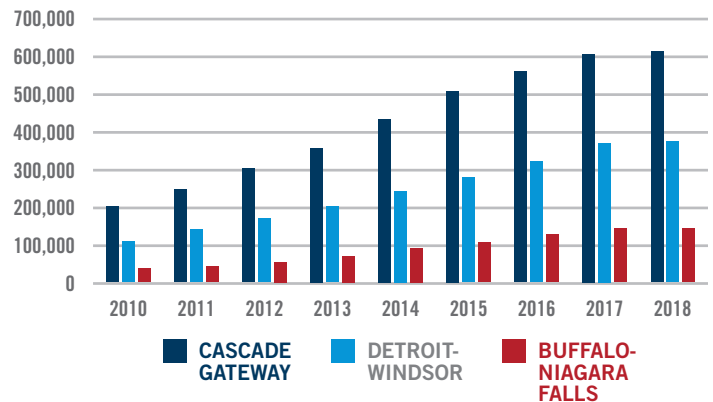
One thing is certain when it comes to Canada-U.S. border policy: what a difference a decade makes. Stakeholders have witnessed policy and technological innovation impacting ports of entry all along the 49th parallel, including initiatives such as the 2011 Beyond the Border Action Plan, advances in biometrics, RFID and facial recognition technology, pre-clearance and pre-inspection pilot programs, and, most recently, the ground-breaking ceremony for the Gordie Howe International Bridge. These efforts – among myriad others – aim toward facilitating legitimate travel and trade between two of the world’s largest trading partners while at the same time securing these partners against threats.

The NEXUS program demonstrates what can be achieved with innovation at the border. An initiative conceived and implemented in the years after 9-11 to allow expedited processing to pre-screened travelers when entering the United States and Canada, NEXUS has experienced significant increases in membership over the past decade. Between 2010 and 2018, NEXUS cardholders tripled at the Cascade Gateway, almost quadrupled in Detroit-Windsor, and represent a five-fold increase at Buffalo-Niagara Falls.

Canada-U.S. stakeholders would have to agree that much success has transpired in Canada-U.S. border policy since publication of the first edition of the Border Barometer almost a decade ago. Yet most also would agree that more work needs to be done. With a foundational belief that further innovation relies upon sound data and analysis, researchers at the Border

Policy Research Institute (BPRI) at Western Washington University, the Cross-Border Institute (CBI) at the University of Windsor, and the University at Buffalo have partnered to bring Canada-U.S. stakeholders this third edition of the Border Barometer. We aim to provide researchers, policymakers, and other interested parties with a better understanding of conditions and trends in three of the most significant cross-border regions along the 49th parallel: the Cascade Gateway, the Detroit-Windsor region, and the Buffalo-Niagara Falls region. This edition outlines similar metrics as the prior editions, with a focus on flows (passenger, truck and rail), trade in goods and commodity composition, and vehicle and passenger traffic. In addition, this publication provides further insight and analysis on impediments, regional policy, and binational networks.

Active NEXUS Members, 2010-2018

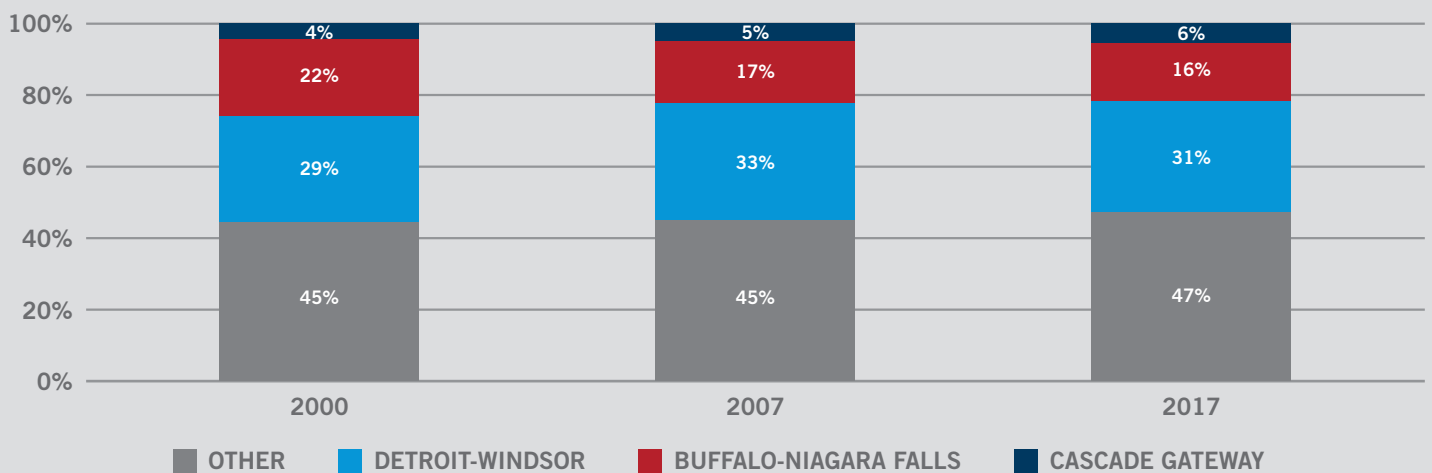


This publication was possible due to financial support provided by the Consulate General of Canada in Seattle.

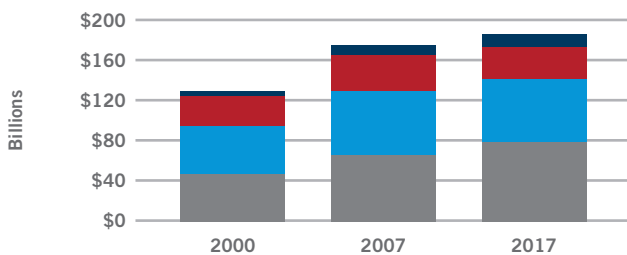
TRADE FLOWS

The share of bilateral trade flows at the three major crossing regions (Detroit-Windsor, Buffalo-Niagara Falls, and Cascade Gateway) declined from 2000 to 2017, but they still accounted for more than half of total trade flows. Buffalo-Niagara Falls had a declining share, while the share of the Cascade Gateway increased over the 17-year period. The three major crossings dominate truck flow volumes in all periods, with substantial growth from 2000 to 2007, but much slower growth from 2007 to 2017, due in large part to declining volume at Detroit-Windsor. It is important to note, however, that slow growth in the latter ten-year period reflects significant decline in the recession years of 2008 and 2009 followed by rapid recovery. For rail, U.S. exports to Canada show steady growth, while Canadian exports to the U.S. show growth from 2000 – 2007 followed by decline from 2007 – 2017. The three major crossings account for less than half of rail flows out of Canada.

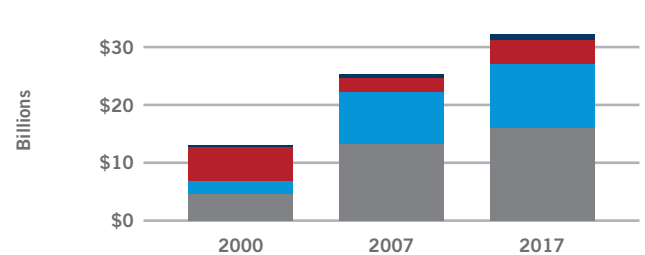
Canada - U.S. Bilateral Trade Flows (Truck & Rail)



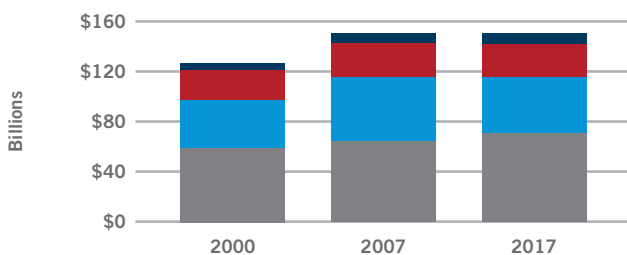
U.S. Exports to Canada by Truck



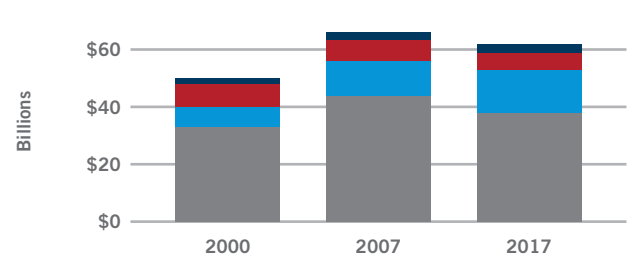
U.S. Exports to Canada by Rail



U.S. Imports from Canada by Truck



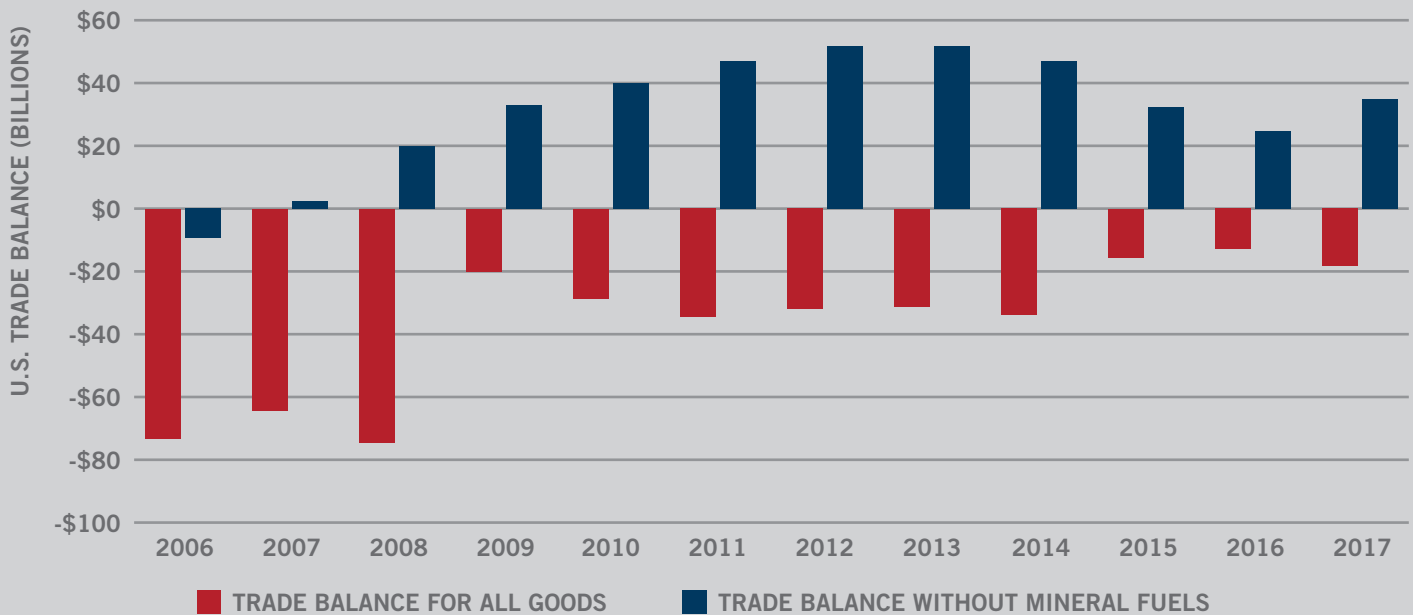
U.S. Imports from Canada by Rail



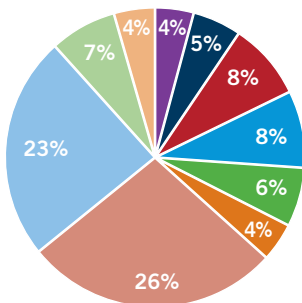
COMMODITY COMPOSITION

A substantial Canadian trade surplus in goods is evident for 2006 – 2008, but is reduced to half or less during the later years. In fact, were it not for the export of oil and gas, the U.S. would have a substantial surplus in goods trade from 2009 – 2017. Total trade flows across the border are asymmetric, with a large share of service exports from the U.S. and a large share of mineral fuels from Canada. The transportation equipment sector, however, exceeds 20% of total flows in both directions, reflecting a high degree of cross-border integration in automotive supply chains. Very large automotive flows are evident at Buffalo-Niagara Falls and especially at Detroit-Windsor, where just under half of flows into the U.S. are of automotive products. By contrast, the most noteworthy share at the Cascade Gateway is of wood and wood products flowing from Canada to the U.S.

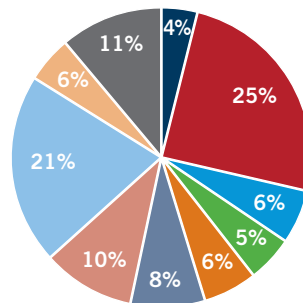
Canada - U.S. Trade Balance in Goods



U.S. Exports to Canada, 2017



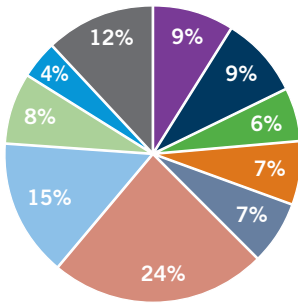
U.S. Imports from Canada, 2017



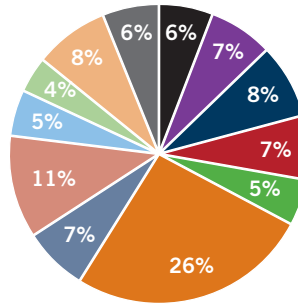
- 01-05 Animal & Animal Products
- 06-15 Vegetable Products
- 16-24 Foodstuffs
- 25-27 Mineral Products
- 28-38 Chemicals & Allied Industries
- 39-40 Plastics/Rubbers
- 44-49 Wood & Wood Products
- 72-83 Metals
- 84-85 Machinery/Electrical
- 86-89 Transportation
- 90-97 Miscellaneous
- 98-99 Service
- Other Commodities (each less than 4% share)

COMMODITY COMPOSITION (continued)

Exports at Cascade Gateway, 2017

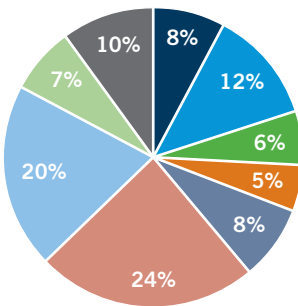


Imports at Cascade Gateway, 2017

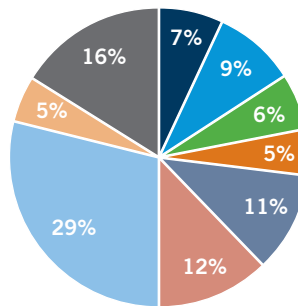


- 01-05 Animal & Animal Products
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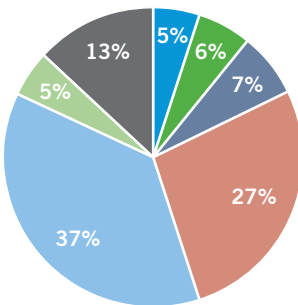
Exports at Buffalo-Niagara Falls, 2017



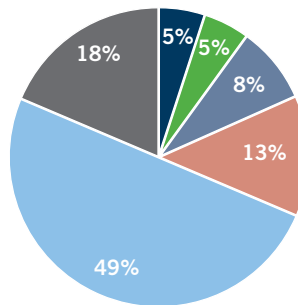
Imports at Buffalo-Niagara Falls, 2017



Exports at Detroit-Windsor, 2017



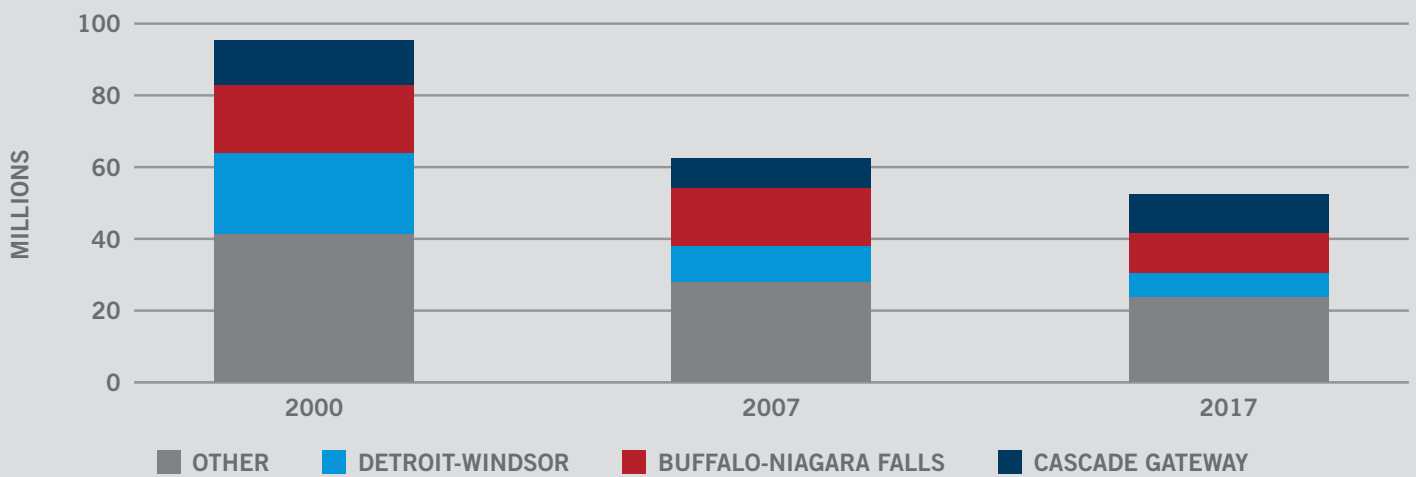
Imports at Detroit-Windsor, 2017



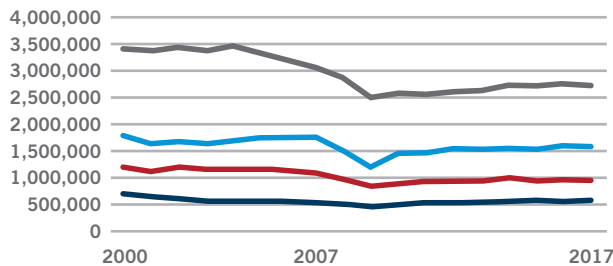
U.S. BOUND VEHICLE AND PASSENGER TRAFFIC, 2000-2017

The most striking trend in border traffic is the severe reduction in passenger traffic. This trend is evident across all three periods at Buffalo-Niagara Falls and Detroit-Windsor, but the Cascade Gateway saw a substantial recovery in passenger numbers from 2007 to 2017, after a decline from 2000 to 2007. Year-to-year trends showed that the flow of passenger cars, which account for most cross-border passenger movement, fell most sharply in 2001, coinciding with the 9-11 terrorist attacks and the associated tightening of border security. It should be noted that air travel from Canada to the U.S. has continued to increase since 2004, with nearly 14 million passengers arriving by air from Canada in 2015.

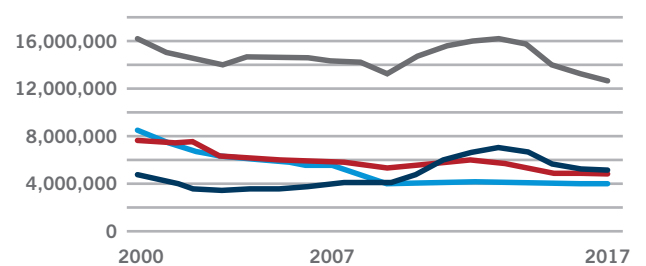
U.S. Bound Passengers and Pedestrians by Region



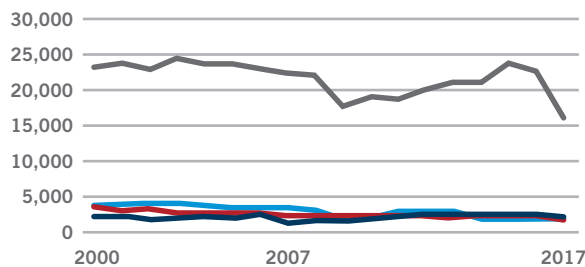
Truck Traffic by Region



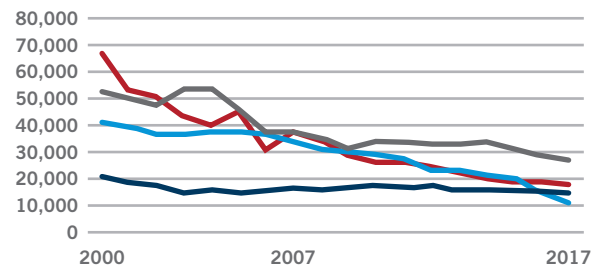
Passenger Vehicle Traffic by Region



Train Traffic by Region



Bus Traffic by Region



IMPEDIMENTS

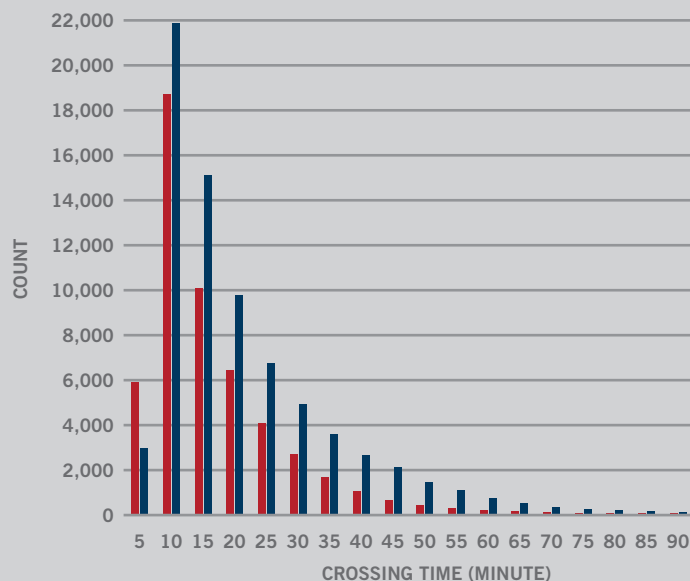
Borders act as impediments to trade by imposing extra costs and extra time on cross-border deliveries. Extra costs are in the form of customs brokers fees, document preparation, obtaining necessary certificates and permits, and a variety of other administrative costs. Extra time is needed both because of congestion at border infrastructure and because of the length of time it takes to complete border processes. Naturally, extra time translates into additional costs in the form of salaries, capital costs and the potential costs arising from late shipments. Taken together, these impediments mean that it is more expensive to move goods cross-border than over a comparable distance within one country.

There is no consistent source of data on border crossing times. However, the University at Buffalo, CBI, and BPRI have all acquired time measures associated with border crossings in their regions, either through their own research or from local sources. While we cannot present strictly comparable data, the following charts and tables present different aspects of crossing time performance at the Ambassador Bridge, the Peace Bridge, the Lewiston Queenston Bridge, and the Blaine, WA crossing.

THE AMBASSADOR BRIDGE: VARIABILITY IN TRUCK CROSSING TIMES

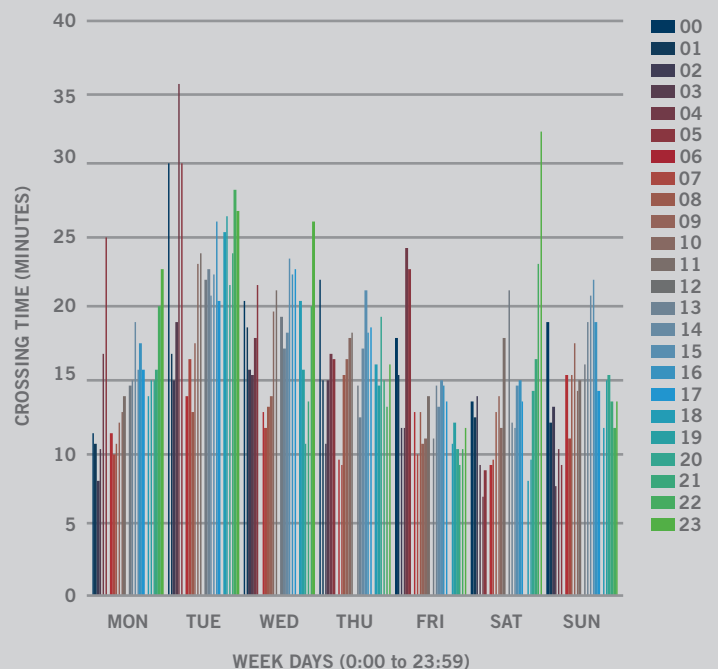
The CBI has generated estimates of crossing time distributions for trucks using only a database of GPS records purchased from Shaw Tracking, Canada's largest provider of GPS services to motor carriers. Here crossing times begin as soon as the truck enters the bridge apron and ends when it is cleared on the other side. Since congestion occurs both on the bridge and in the queue, these times are not comparable to those for the Peace Bridge. The focus of the research was on the variability of crossing times, which is an important consideration for the movement of goods in just-in-time supply chains that cross the border. The distribution graph is based on more than 50,000 crossings in each direction during calendar year 2016. In order to eliminate referrals to secondary inspection, only times of 90 minutes or less are included in the sample. The first graph shows that while most trucks clear the crossing in under 15 minutes, times of an hour or greater are not unusual. The second graph, which gives averages by hour for each day of the week, shows that there are not clear patterns that help carriers schedule around significant delays.

CROSSING TIME AT THE AMBASSADOR BRIDGE



■ SOUTHBOUND TRAFFIC (TO CANADA)
 ■ NORTHBOUND TRAFFIC (TO THE U.S.)

CROSSING TIME AT THE AMBASSADOR BRIDGE (CANADA BOUND)

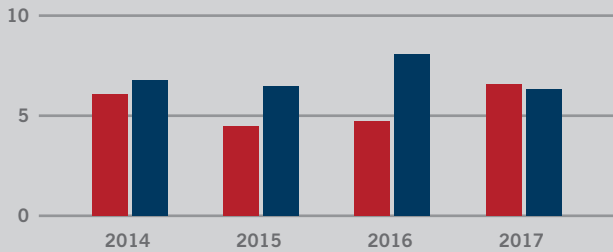


IMPEDIMENTS (continued)

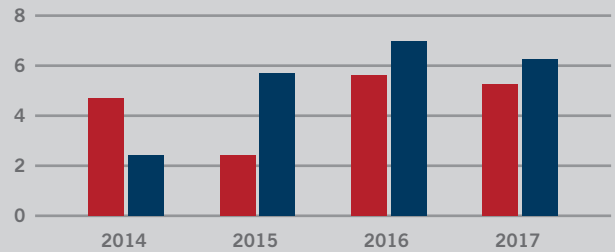
THE PEACE BRIDGE: RECENT TRENDS IN WAIT TIMES

The average wait times, which were obtained directly from the Peace Bridge, begin when the vehicle stops at the tail of the queue of the primary inspection line (PIL) and ends when it is released. While there is considerable variation, there is no clear trend over the four-year period. While truck wait times are generally higher, there are exceptions such as 2014 Canada bound and 2017 U.S. bound.

AVERAGE WAIT TIMES IN MINUTES: U.S. BOUND



AVERAGE WAIT TIMES IN MINUTES: CANADA BOUND

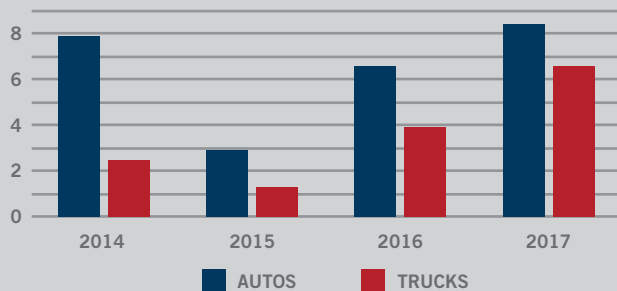


■ AUTOS ■ TRUCKS

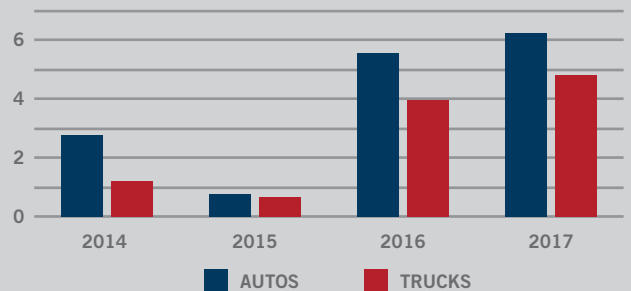
LEWISTON-QUEENSTON BRIDGE: RECENT TRENDS IN WAIT TIMES

Average wait times for the Lewiston-Queenston Bridge were obtained directly from the Niagara Falls Bridge Commission. In comparing data from 2014 to 2015 for U.S. bound auto traffic, wait times experienced a steep decline, only to shoot back up in 2016 and reaching a high of 8.46 minutes in 2017. Average wait time data for U.S. bound truck traffic also demonstrate a decline from 2014 to 2015 and increases in subsequent years, with a peak of 6.60 minutes in 2017. With regard to Canadian bound traffic, the data mirror U.S. bound traffic trends.

AVERAGE WAIT TIMES IN MINUTES:
U.S. BOUND



AVERAGE WAIT TIMES IN MINUTES:
CANADA BOUND



■ AUTOS ■ TRUCKS

IMPEDIMENTS (continued)

BLAINE CROSSING: SPECIAL LANES AND VARIABLE WAIT TIMES

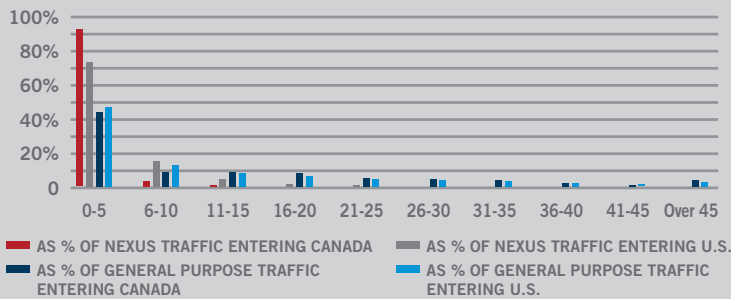
In partnership with the International Mobility and Trade Corridor Program, BPRI has collected crossing time indicators through direct field observation for several years. Among the results of these observations are the significant time savings accrued for cars and trucks participating in trusted trader and trusted traveler programs. For example, processing times for cars entering the U.S. (defined as the time from when a car leaves the head of the queue to when it is cleared) are only 10 seconds for cars in the Nexus lane and 30 seconds in the “RFID Ready Lane,” compared with 51 seconds in the general-purpose lane. While the individual time savings may be minor, the savings accrued to the overall system of border crossing traffic are significant.

For trucks, wait times for general purpose lanes average 6.5 minutes entering Canada and 15.8 minutes entering the U.S. FAST lane wait-times are not only shorter, but are also less variable. For FAST trucks entering Canada, nearly 80 percent wait less than one minute. However, for FAST trucks entering the U.S., nearly 80 percent wait more than five minutes, with an average of nearly 10 minutes (compared to 15.8 minutes in the standard lane). This is likely in part due to the configuration of the FAST lane entering the U.S., which during long queues is not immediately accessible to eligible trucks.

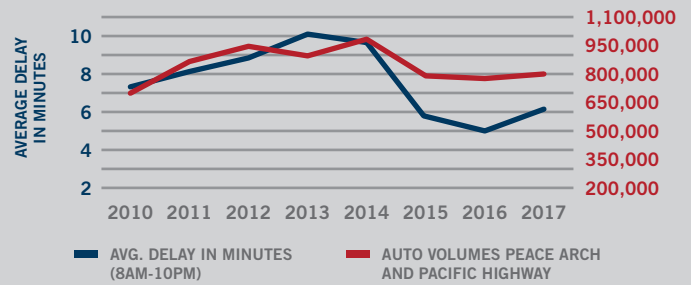
There is an ongoing issue of long wait times for cars at Blaine, which fluctuate both seasonally and throughout the day (Blaine comprises both Peace Arch and Pacific Highway ports). The line graph below shows the relationship between wait-times and auto volumes during the peak travel month of August, from 2010 to 2017. Although changes in average delay tend to follow changes in volume, there are exceptions, notably between 2012 and 2013, when volumes decreased and average delays increased, and again from 2016 to 2017, when average delays increased at a greater rate than auto volumes. These divergences are likely the result of the ability of CBP and CBSA to adjust to staffing needs. Overall, wait times at Blaine have declined since they peaked in 2013/2014, when volumes were highest. Current wait times are both more consistent and lower than they were prior to the peak. This is in part attributable to the higher usage of Nexus, which comprises 42% of cars at Blaine.

The histogram below illustrates the current distribution of wait times by direction and lane at Peace Arch.

WAIT TIMES AT PEACE ARCH IN 2017



AVERAGE DELAY & AUTO VOLUMES IN AUGUST 2010-2017*



*While auto volumes are based on 24 hours, average delays are calculated from 8am to 10pm, when the bulk of traffic occurs.

Both graphs are based on data from the Cascade Gateway Border Data Warehouse, available at: <http://www.cascadegatewaydata.com/Crossing>.

REGIONAL POLICY

CASCADE GATEWAY

The border between Washington State and British Columbia is commonly referred to as the “Cascade Gateway.”¹ This system of border crossings is characterized by trade and travel patterns that differ notably from those in the Detroit-Windsor and Buffalo-Niagara regions.²

The nature of cross-border passenger travel through the Cascade Gateway is dominated by a few outstanding characteristics. The most recent studies conducted by the BPRI and Whatcom Council of Governments show that cross-border travel is undertaken by both Canadians and Americans for discretionary purposes, with over half of Canadians crossing the border to shop and purchase gas and over half of Americans crossing to engage in recreation and vacation.³ The cross-border population is also heavily dominated by Canadians. For these reasons, cross-border volumes are impacted by shifts in the Canada-U.S. exchange rate, resulting in border economies in Washington that are greatly affected by changes in retail sales tax revenue. The Cascade Gateway also has a high number of NEXUS users, with over 40% of travelers using the program at the Blaine crossings.

There is a unique institutional fabric in the region that consists of two active and long-standing cross-border organizations: the International Mobility and Trade Corridor Program (IMTC) and the Pacific Northwest Economic Region (PNWER). These organizations, working in tandem with various sectors of government, private sector, and civil society have addressed cross-border issues through the development of pilot projects and political advocacy. Similar efforts exist in relation to cross-border environmental issues, most notably the binational Salish Sea Ecosystem Conference and the newly created Salish Sea Institute, both of which focus on transnational cooperation and management of the marine environment that spans the BC-Washington border. In addition, the governments of Washington and BC have signed a number of memorandums of understanding (MOUs) in the past, and in 2017, the Governor of Washington addressed the Legislative Assembly of BC, the first such visit since 1984. This highlights how the level of cooperation between the two governments continues to strengthen.

One of the current defining features of the Washington-BC region is the growing development of the hi-tech industry in both Seattle and Vancouver. With both Microsoft and Amazon (who have headquarters in Seattle) expanding to Vancouver, there is a knitting together of industry, labor, and transportation within these companies that spans the border. In 2016, the Premier of BC and the Governor of WA signed the Cascadia Innovation Corridor MOU to advance the innovation economy, recognizing “a history of productive and effective collaboration between the two jurisdictions.”⁴ The initial stages of this partnership have supported a feasibility study for a high-speed rail corridor between Seattle and Vancouver as well as a new seaplane service between the two cities.

¹ The Cascade Gateway includes a system of four ports that all feed the Interstate 5 corridor: Peace Arch/Douglas, Pacific Highway, Lynden/Aldergrove and Sumas/Abbotsford-Huntington.

² For a detailed analysis of the border and this region, see BPRI publication “Washington State’s Economy in Relation to Canada and the Border.” Available at https://cedar.wvu.edu/bpri_publications/92/.

³ Full analysis and findings available at <http://theimtc.com/passengersurveys/>.

⁴ Available at https://news.gov.bc.ca/files/BC_WA_Innovation_MOU.pdf.



REGIONAL POLICY

BUFFALO-NIAGARA FALLS

The cross-border region encompassing Western New York and southern Ontario (the “Greater Golden Horseshoe”) is unique among North American binational regions for the size and density of its population, as well as the depth and breadth of its cross-border assets. Among the binational regions examined in the 2018 edition of the Border Barometer, it is the largest, with a 2016 population of more than 10 million. With four international bridges, cross-border rail connections, and four major airports, the region reigns as a significant port of entry along the Canada-U.S. border, facilitating more than 16% of commerce between the world’s largest trading partners. Integrated, cross-border supply chains in sectors such as the life sciences and agrifood processing are complemented by an advanced logistics industry and sophisticated “soft” infrastructure: customs brokers, 3PLs, warehousing, attorneys, insurance brokers, and bankers, among others. In addition, this region boasts strong cross-border shopping, heritage, and tourism economies, drawn in part by Niagara Falls and two of the five Laurentian Great Lakes (Lakes Erie and Ontario).

This cross-border region is distinct from its counterparts in other ways as well. Unlike the Pacific Northwest Economic Region, there is no formalized state-provincial organization or institution to frame and facilitate economic and civic efforts across the border. Thus, most cross-border activity in the Western New York-Greater Golden Horseshoe region truly is engaged “from the bottom up.” Also, unlike the U.S. plaza for the Gordie Howe International Bridge in Detroit Windsor, which is over 100 acres in size, the Peace Bridge, a main artery across the northern border, is constrained to operate with a U.S. plaza only 14 acres in size because it is located in a densely populated urban neighborhood in the City of Buffalo. Rather than view these as constraints, CA-U.S. stakeholders in this region see the potential for innovation.

In terms of innovative economic and civic activity, two initiatives deserve mention. First, the Buffalo Niagara Partnership, Greater Niagara Chamber of Commerce, and Hamilton Chamber of Commerce entered into a strategic agreement in 2017 that provides for reciprocal membership in each chamber. This translates into opportunity to collaborate with a wider network of business professionals across the border. The Brock University-University at Buffalo Cross-Border Prosperity Initiative is another ongoing example of “bottom-up” activity. This effort, which is a partnership among academic, private sector, government and non-profit entities in Canada and the U.S., aims to use strategic intelligence and “the power to convene” to provide useful tools to cross-border stakeholders and strengthen the network capacity of subnational economic and civic entities in the cross-border region.

The Pre-Arrival Readiness Evaluation (PARE) program also is an example of innovation born out of constraints faced by the Buffalo and Fort Erie Public Bridge Authority (PBA), which owns the Peace Bridge. With the rehabilitation of the Peace Bridge slated to begin in late 2016, stakeholders realized that they needed a solution to ensure unabated truck flows at this crossing, given the imminent construction and size of the U.S. plaza. PARE requires all trucks crossing at the Peace Bridge to have an e-manifest on file and user fees prepaid prior to crossing. PARE technology reads a license plate and is then matched to an e-manifest filed with Customs and Border Protection (CBP) officials; the reader also determines if the relevant user fee has been paid. If there is a match to the manifest filing and the fee payment, a truck receives the “green light” to cross the border. By not having to handle cash or other payments, CBP officers working in primary inspection are clearing trucks faster and reducing bottle necks on the U.S. plaza. The PBA provides full funding, technology, staffing, and land for PARE, yet requires strong cooperation with CBP. This innovation at the local level has been so successful that U.S. agencies are considering implementing these requirements across the northern border in the future.

REGIONAL POLICY

DETROIT-WINDSOR

The border crossing between Detroit, Michigan and Windsor, Ontario is the most important freight connection between Canada and the United States. While some freight shipments move through road and rail tunnels below the Detroit River and via a truck ferry across its surface, the overwhelming majority are across the 88-year-old Ambassador Bridge, which carries about 2.5 million trucks per year. The Ambassador Bridge and the Detroit-Windsor Tunnel also support about 8.5 million passenger trips per year.

These high numbers reflect the position of the Detroit-Windsor River at a nexus of North American road and rail networks. They also reflect the high degree of cross-border integration in the Great Lakes and St Lawrence River region. Much of the freight moves in cross-border supply chains whereby thousands of Canadian and American facilities in automotive, agrifood and other industries are connected into highly synchronized production systems. Passenger flows also reflect economic integration, with over 6,000 residents of the Windsor region commuting to jobs in the U.S. Research at the Cross-Border Institute (CBI) indicates that these massive international flows are mutually beneficial, making the region more globally competitive and resilient. We call this the Binational Advantage.

Despite the success of cross-border integration, frictions at the border continue to deter the binational region from reaching its full potential. Cooperative efforts such as the U.S.-Canada Beyond the Border Action Plan are yielding benefits, but there is much more to be done. CBI research, using dedicated sensors and eliciting trends from billions of GPS records, is documenting these frictions and providing the information base for devising new methods of border management that combine sensors, wireless communications, and artificial intelligence with best administrative practice in customs, immigration, and security.

The Detroit-Windsor crossing is soon to experience its most significant transformation with the construction of the Gordie Howe International Bridge. Not only will this be a much-needed replacement for infrastructure that has reached the end of its service lifetime, it will create for the first time a highway-to-highway connection across the border. It will also be the key link in a corridor of improved and expanded highways stretching from Toronto to Kentucky.



BINATIONAL NETWORKS

At a time when Canada-U.S. relations are strained in Washington, D.C. and Ottawa, we are reminded that stakeholder networks outside these corridors of power engage directly in the relationship. The chart below captures the breadth and depth of the myriad existing networks in the Cascade Gateway, the Detroit-Windsor region, and the Buffalo-Niagara Falls region. These networks embody actors across sector and scale and play an important role in the day-to-day management of the Canada-U.S. relationship in areas related to border policy, transportation and infrastructure, economic development, and commerce.

	MULTI-REGIONAL	CASCADE GATEWAY	DETROIT-WINDSOR	BUFFALO-NIAGARA FALLS
INTERGOVERNMENTAL: MULTI-SCALE HORIZONTAL AND VERTICAL NETWORKS	International Joint Commission; Canada-U.S. Transportation Border Working Group	International Mobility & Trade Corridor Program	Blue Water Bridge (Michigan DOT and Federal Bridge Corporation)	Peace Bridge Authority (Canadian Minister of Transport appointees and NY State appointees)
INTERGOVERNMENTAL: STATE/PROVINCIAL/LOCAL HORIZONTAL NETWORKS	Council of State Governments	Pacific Northwest Economic Region; BC-WA MOU; Joint Transportation Executive Council	Michigan-Ontario MOU	Niagara Falls Bridge Commission; Cross-Border Mayors; NY State-Ontario MOU (2001); NYDOT-ONMT
NON-STATE: PRIVATE SECTOR NETWORKS	Can/Am Border Trade Alliance; Can-Am Business Council; North American Strategy for Competitiveness; Council of the Great Lakes Region		Canada-U.S. Business Assoc. (CUSBA)	International Trade Gateway Organization; World Trade Center Buffalo Niagara; MOU among Buffalo, Niagara Region and Hamilton Chambers of Commerce.
NON-STATE: CIVIC AND ACADEMIC NETWORKS	Canada Institute at the Woodrow Wilson Center	Border Policy Research Institute; Salish Sea Institute; Cascadia Urban Analytics Cooperative	Detroit-Windsor Amazon HQ2 bid; Detroit and Windsor-Essex Economic Development Corporations; Cross-Border Institute	WNED/WBFO (media station)
INTERGOVERNMENTAL AND NON-STATE (PRIVATE SECTOR, CIVIC AND ACADEMIC) NETWORKS		Cascadia Innovation Corridor	Windsor Detroit Tunnel (Cities of Windsor and Detroit with a private operator)	Cross-Border Prosperity Initiative (University of Buffalo and Brock University)

Note that security networks have not been included.

CONCLUSION

Looking at the data presented in the Border Barometer, a couple of common misconceptions are dispelled. For the most part, truck and rail freight had recovered or surpassed pre-recession levels by 2017. Since this required a significant climb back from the depths of the recession years, it is not so clear that surface trade is in a long-term slump. The number of passengers entering Canada and the United States at land borders, however, has declined significantly since 2000. The U.S. merchandise trade surplus with Canada has narrowed in recent years, and in fact the U.S. would have a surplus were it not for shipments of mineral fuels (oil and gas). Since imports of these fuels from Canada are often seen as more secure and desirable than imports from other countries, the general picture is of a trade relationship that is balanced and beneficial to both countries.

Details of commodity composition at the three major crossings show prominent roles for a few key sectors, notably Canada-U.S. flows of wood products at the Cascade Gateway and flows in both directions of transportation equipment (mostly cars, light trucks, and parts) at the Detroit-Windsor and Buffalo-Niagara Falls crossings. Service exports from the U.S. to Canada are prominent at all three gateways. Mineral fuels, which are prominent in aggregate Canada-U.S. flows, play smaller roles at the three crossings because they mostly move by pipeline rather than road or rail.

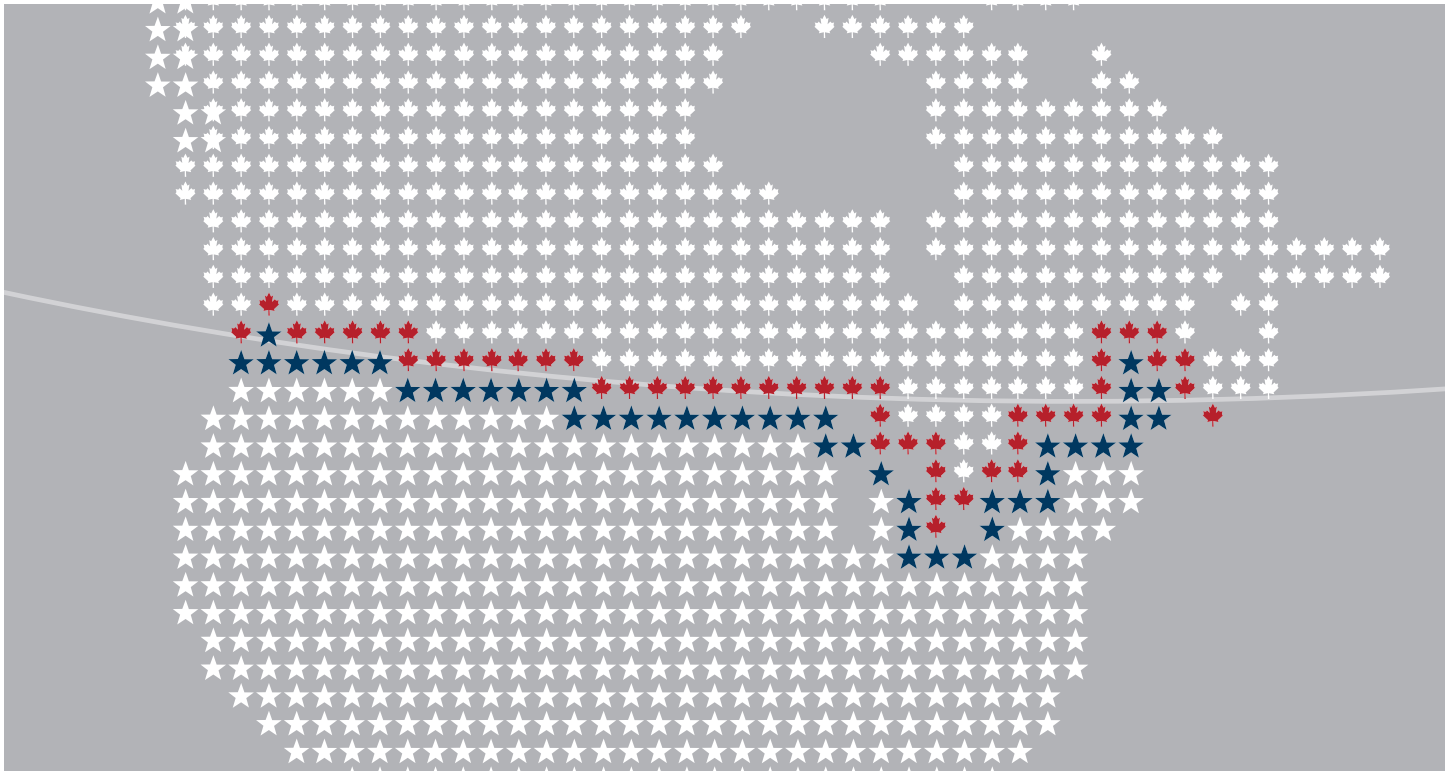
Measuring crossing times for cars and trucks presents a few challenges, and while we cannot show directly comparable data for all three crossings, the data we have indicates two things. The first is that average crossing times are generally lower than many people think they are. The other is that crossing times are highly variable, which is a particular problem for the movement of goods in cross-border manufacturing supply chains.

The three crossings have distinctive roles and characteristics. Detroit-Windsor is the largest single crossing for freight, with a strong automotive sector. The Buffalo-Niagara Falls region is similarly freight-intensive but is more diversified and has four border bridges, in contrast to one at Detroit-Windsor. The new Gordie Howe International Bridge, however, will soon provide more capacity and redundancy across the Detroit River. The Cascade Gateway is notable for a high level of cross-border collaboration with major participation from governments at all levels in the U.S. and Canada. All three crossings are served by binational institutional networks. Recent bottom-up initiatives at the Buffalo-Niagara Falls crossing are especially noteworthy. The formation of the Northern Border Agencies and Stakeholders Engagement at the Detroit-Windsor crossing has just recently been announced.

The Border Barometer illustrates the value of current and comparable data on the performance of land crossings that are crucial links in the massive and mutually beneficial Canada-U.S. trade relationship. While there is good data on cross-border flows, data on border impediments remains scattered and inconsistent. Unfortunately, this is the data that indicates how much the border impedes trade and provides the specific metrics needed to direct innovative border investments and policies. In the current data-rich environment, GPS, cellular, and other communication technologies that are already present in most vehicles can provide the data needed for border performance assessments, reducing the need to invest in fixed sensors. At the same time, data on passenger trip purposes and cross-border travel patterns is best sourced from primary, survey-based field research. *A whole-border platform for collection and sharing of data on border impediments should be given a high priority in order for innovation to continue along the entire Canada-U.S. border.*



BORDER BAROMETER



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