



# BEYOND PRECLEARANCE

The Next Generation Canada–U.S. Border

## Executive Summary

October 5, 2018



# Beyond Preclearance Coalition

The Beyond Preclearance Coalition is comprised of bi-national organizations with a vested interest in advancing the efficiency and security of the Canada - U.S. border.



Aéroports de Montréal



Air Canada



Airlines for America



Airports Council International  
North America



Association of Canadian  
Port Authorities



BNSF Railway



Business Council of Canada



Calgary Airport Authority



Canadian Airports Council



Canadian/American  
Border Trade Alliance



The Canadian Chamber  
of Commerce



Canadian National Railway



Canadian Pacific Railway



Canadian Trucking Alliance



Council of the Great Lakes Region



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North American Strategy for Competitiveness



National Airlines Council of Canada



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# Executive Summary

Canada and the United States share a long history of border innovation and excellence. Four major bi-national efforts since the 1995 Shared Border Accord created our current framework for co-operation, culminating in the 2011 Beyond the Border Action Plan. The 2015 Land, Rail, Marine and Air Transport Preclearance Agreement (LRMA) also promises to generate incremental benefits in the coming years.

Much work remains, however, to address a range of processing and policy issues to fully co-ordinate efforts between governments and between the private and public sectors. The Beyond Preclearance Coalition was formed to develop a long-term vision for trade and travel, especially with the recent United States-Mexico-Canada Agreement (USMCA), which is the successor to the North American Free Trade Agreement (NAFTA).

The group commissioned a white paper and a series of six consultations, including events hosted by the Woodrow Wilson Center and Public Policy Forum. Views from governments and border stakeholders were gathered from March to August 2018. The feedback resulted in the creation of the Beyond Preclearance vision, which articulates the direction for border innovation to improve efficiency, effectiveness and security.

The consultations revealed a strong desire to create predictability in border and security processing. More importantly, the border was seen as a place that goods and people flow, not as a single line or step. A shared vision was developed encapsulating a future for the United States and Canada.

*The shared vision for U.S. & Canada:*

**Predictable, secure and integrated  
borders that can scale to future  
opportunities, threats and volumes**

## Context

The new vision is based on eight major challenges within travel and trade sectors and the services that enable border and security clearances:

### **1. Inability to keep up with traffic growth**

Traffic volumes will continue to grow, nearly doubling across all modes in the next 20 years, with the aviation sector reaching almost 2.5 times more traffic by 2038. The concern is whether our systems will be able to keep up with growth or be limited by insufficient resources, leading to long queues.

### **2. Wasted resources from duplication**

Significant progress has been made in the last 25 years to remove a large portion of paper-based processes, from multiple data-entry to duplicated application forms. More work remains to simplify programs, many of which are separate, requiring almost the same information and are aimed at similar objectives.

### **3. Privacy issues must be addressed up front**

With the proliferation of information sources tied to personal

identity or commercial confidentiality, there is the need to improve the performance of the entire system to better manage privacy. Privacy by Design and its seven principles identify best practices that augment existing public agency requirements to conduct privacy impact assessments and do so early in the process.

#### **4. Ensuring ideas are future-proof**

Scalability and systems that cannot be linked together are examples of problems still faced as border process requirements evolve. Standalone systems may be desirable for speed of implementation but there is the need to ensure connectivity with future changes to systems.

#### **5. Resilience to evolving threats**

Dynamic and asymmetric threats are problems faced by public and private sector stakeholders. The resilience of the system to accommodate future shocks through risk-based approaches also further reinforces the need to develop as much efficiency in the system today as possible.

#### **6. Lack of sustainable private-public partnerships**

From user fees to investments in facilities and requirements, there is a perception of an unsustainable model for funding future changes. The private sector presents strengths in investment, acquisition, technology deployment and research. These may also represent the opportunities to sustain future co-operation.

#### **7. Underuse or overuse of technology**

In the past two years, there has been focused efforts towards product-based pilot projects. “The blockchain pilot” or the “biometric pilot” are important because they are emerging technologies with benefits. The use case however needs to balance the process, staffing envelope and risk model to ensure the success for new technology adoption.

#### **8. Global competition**

Finally, the challenge collectively is not the debate over whether Canada or the U.S. stands to gain from future improvements. The economies are intricately linked, as are the cycles of innovation in border and security excellence. The competition is how Canada and the United States, as a U.S. \$100-trillion economy by 2038, will remain competitive in the world market.

## **Technology**

To achieve the vision for a predictable, secure and integrated border, we have identified eight game-changers in technology that will form the building blocks for the evolution of border management:

- **Next-generation biometrics:** enable upwards of 50% faster throughput through airports, land borders, rail and seaports and will likely replace many of the existing border kiosks.
- **Remote and multi-use screening:** provide the ability for one scan to be reused by multiple border agencies in each country from thousands of miles away.
- **Drone networks:** offer last mile delivery or pickup, as well as niche applications for border communities, provided that secure protocols are in place for flight operations.
- **Blockchain:** provides the potential to revolutionize the communications between systems that previously were not easy to link together and dramatically reduce the costs of solutions such as single-window interfaces.
- **Real-time and artificial intelligence:** can leverage historical data to conduct pattern matching and enhance

the ability for officers to make decisions on risk management.

- **Mobile smartphone apps:** can provide easy-to-access bi-directional communication to help in way finding, transmission of photographs and documents, and manage people and goods movements in real-time or in advance.
- **Autonomous vehicles:** can assist in providing border controls built on a robust set of sensors, geolocation methods and intelligent routing (i.e. to secondary processing if required).
- **Enterprise cloud services:** can reduce downtime and create redundancy in the management of large data sets, from biometric information to supply-chain data.

## Vision & Flows

Process flows have been developed based on reviewing the current issues for trade and travel, along with proposed near-term (2-5 years) and long-term solutions (10+ years) that move Canada and the United States towards a more predictable, secure and integrated vision.

Fifty-four initiatives have also been developed for maritime, aviation, rail and land modes of transportation, with the vast majority applicable across all sectors.

### Shift to large data sets to analyze risks

For all modes of transportation there is a fundamental shift away from the plethora of trusted traveler and trade programs. From NEXUS, PreCheck, Global Entry, Customs Trade Partnership Against Terrorism, Free and Secure Trade, Partners in Protection, among others, there is a view to:

- Simplify the risk management framework with travel and trade history, particularly for the United States and Canada.
- Tie facilitation benefits to information based on a single token (e.g. biometric for individuals or traceable identifier for goods).
- Retain trusted and known traveler models for foreigners to address those with potentially limited travel histories.



The shift represents as profound a change as the differentiation of “primary” and “secondary” processing that both governments introduced for border management in 1971 and creates opportunities for a controlled, free-flow environment.

## Maritime

Container, break-bulk and other commodities shipped to the United States and Canada have experienced significant changes since 2001. Pushing the borders out is largely a success, especially for container movements. More work remains to incorporate clearances for U.S. Customs and Border Protection (CBP) and Canada Border Services Agency (CBSA), and across all government agencies. This will enable intermodal transfers to trucking and rail to move more efficiently from one country to the other.

Cruise passengers are largely air transfers and for certain markets (e.g. Alaska or Caribbean cruises) there is the opportunity to further leverage biometrics further to enhance processing. Same-day entry and exit between countries could be greatly facilitated. Six cruise lines have already started to generate pilot projects on biometrics with CBP and this can be further integrated with air transfers and CBSA processes.

## Aviation

A robust system exists for in-bond air cargo, but similar to the maritime mode, more is needed than just approvals from a customs agency. A whole of government approach is needed to deal with different commodities – specifically agricultural products. Consequently, a future view towards testing out full in-bond air-air and air-truck is needed, as well as advancing air cargo preclearance.

Air passengers have several important dynamics due to the rapid growth of traffic, and the large number of biometrics implementations. Key initiatives include:

- Further integration of passenger vetting and biometrics to ensure that Canada and the United States are not at a competitive disadvantage versus Europe in attracting foreign tourists.

- Early results demonstrate upwards of 50% throughput benefits compared with the current generation of automated passport control. A unified approach is needed in the preclearance environment.
- Create a streamlined connections environment. Canada has made major improvements at airports in recent years. Biometrics may provide the ability to better manage connections at U.S. facilities.

Further co-operation can be advanced by leveraging excess capacity at new U.S. preclearance sites for Canadian-bound traffic. Joint preclearance could be a stepping stone for full global preclearance starting with allied countries such as the United Kingdom, Australia and New Zealand and potentially be integrated with exit control facilities and systems.

## Rail

Rail is the second largest mode after trucking, moving some 15% of US-Canada trade. One of the major sources of demand for rail movements is shipments moved to rail cars from ports. At the same time, there is U.S. and Canadian-origin traffic from North American based factories, lumber yards, etc. The principle is the same; clear before departure and minimize the activity needed at the border itself. Remote screening and en route clearance processes could significantly reduce the burden on rail lines at the border to de-stuff containers or rail cars for inspection.

Similar to air and cruise ship processing, the model for preclearing passenger trains or clearing upon arrival would greatly benefit from the biometric model of processing.

## Land Border

Land borders require careful co-ordination of lanes and infrastructure at border plazas. Preclearance offers more flexibility to locate activities away from the physical border. More efforts are needed to ensure traffic can be streamed through the introduction of biometrics to confirm identities, by using mobile technologies to ensure trucks and cars are ready to proceed and by limiting the amount of stops at the physical border in favor of activities before departure, en route or at a controlled destination upon arrival.

## Benefits Model

A comprehensive border wait time and supply chain model was developed to assess the benefits of the vision articulated for the Beyond Preclearance Coalition. Whether it is saving five seconds per transaction or gaining 50% more throughput, there are significant gains in the 54 initiatives outlined that can create improved flows into Canada and the United States and between the two countries.

The annual savings based on today's volumes are estimated to be more than \$13 billion. Over 20 years, the benefits could total in excess of \$300 billion.

Mode	Traveler	Goods # Movement	Total Annually
Maritime	\$5 M	\$1,245 M	<b>\$1,250 M</b>
Aviation	\$106 M	\$3,228 M	<b>\$3,334 M</b>
Rail	\$1 M	\$4,596 M	<b>\$4,597 M</b>
Land	\$162 M	\$3,878 M	<b>\$4,040 M</b>
<b>Total Annually</b>	<b>\$269 M</b>	<b>\$11,702 M</b>	<b>\$13,221 M</b>

In addition, the ability to create greater throughput across border and security facilities can help delay future expansion projects, which can then be built as demand requires. The value of this space is highly variable to each facility. Deferring capital investments could exceed \$1 billion in aggregate in the first five years depending on the size and scope of projects.

## Enabling the Vision

To bring this vision to life, enhancing the border and security environment requires a focus on five key areas:

**1. Bilateral mechanisms:** a four-tier governance structure is proposed to include senior leadership and engagement of industry stakeholders. The four levels would include a bi-national executive committee, supported by action committees and work groups linked to existing industry-government mechanisms. This structure addresses the periodic four-to-seven-year ramp-up and ramp-down cycle of border action plan teams.

**2. Choices for reinvestment:** Based on activity forecasts and current processes, 38,000 new officers are required to handle growth at current service levels for border and security processing in the next 20 years.

The additional officers required represents a joint value between Canada and the United States of \$30 billion in labor in today's dollars based on the current processing model. The choices are to:

- **Constrain the system:** resulting in potential economic damage with unacceptable delays and/or compromising risk management,

- **Hire to match growth using today’s model:** adding at least \$30 billion in government expenditures to cover the additional labor costs, or
- **Implement the initiatives outlined in this paper:** rather than finding the case to spend \$30 billion to keep up with growth over the next 20 years, spend a portion of this funding to realize gains in efficiency with increased throughput and reduced duplication.

Building upon the early successes of investments in biometric entry systems that create 50% more throughput per CBP officer or improved cargo screening that increases efficiency by four-fold, there will be many solutions that could be cost-neutral to government. Several billion dollars of new spending will be needed subject to further business case analyses; however, it will be a fraction of the cost of hiring 38,000 new officers.

**3. Return on investment (ROI) for solutions:** Changes are needed to move away from the current practice of cost recovery and focus on private sector investment to create benefits. Whether it is a set of new flights or reducing queues, decision analysis needs to fundamentally change to ensure public-sector funding streams are clear in the baseline funding, versus areas where the private sector can create solutions that create win-win situations.

There is a potential ROI of two to four times based on existing improvements evaluated and recommended in the Beyond Preclearance vision.



**4. Research and development:** Applied research and technology acceleration are areas that are currently understated in the United States-Canada border relationship. For the ideas in Beyond Preclearance to succeed, there needs to be concerted efforts to implement a standing research mechanism similar to the Cooperative Research Program (CRP) model housed in the U.S. National Academy of Sciences. Joint academic, industry and government research efforts can pay dividends to ensure that solutions and economic impacts are clear to stakeholders and decision-makers alike.

**5. Progressing facilities:** Lastly, the provision of free space to governments is a source of friction framed around a set of technical design standards used by both countries. Escalating costs and out-of-date information are some of the issues that are problematic for stakeholders. Technology and risk-based approaches can reduce need for expanded infrastructure.

## Next Steps

A set of 16 pilot projects are recommended to begin immediately as a first step towards realizing the vision of a predictable, secure and integrated border. Pilot projects are modal independent – meaning each transportation mode has the potential to implement pilot projects along five themes:

1. Adopt a Remote Clearance Approach
2. Screen Once, Accept Multiple Times
3. Manage to a Trusted Secure Token
4. Move Away from Fixed Checkpoints to Clearing Flows
5. Harness Big Data

These pilot projects will be further developed through upcoming industry-government forums in 2018-19.

## 2038



\$100 Trillion Economy  
460 Million Residents

## Growth

**2-2.5x**

More Cargo

**1.7-2x**

More Travel

## New Border Vision

-  Predictable
-  Secure
-  Integrated

### Technology Game Changers

- Changes business model for operations
- More effective resources
- More security functionality

### 54 New Processes



### Reduced Need for 38,000 New Officers



### New Model

- Joint Governance
- Technology Acceleration
- Applied Research
- Facilities

## Results/Benefits

- \$13 billion/year travel/supply chain benefits
- Reduced/deferred facility costs
- Potential savings to incremental hires
- 2x to 4x return on investment

## More Competitive U.S. and Canada

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[www.beyondpreclearance.org](http://www.beyondpreclearance.org)