



# CROSS-BORDER INSTITUTE

## The Gordie Howe International Bridge and the Bi-National Great Lakes Economic Region: Assessing Economic Impacts and Opportunities

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### Final Report Summary

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## Introduction

The Cross-Border Institute (CBI) at the University of Windsor, with the support of researchers at Michigan State Policy Center and Armstrong Trade and Logistics Advisory Services, Inc, conducted a study whose twofold purpose is to: first, better understand and communicate the economic significance of the Gordie Howe International Bridge for the future of the binational Great Lakes and St. Lawrence (GLSL) region and second identify actions by both private and public sector actors over the coming years that are needed to ensure that the full potential for economic benefits are realized. This brief gives a summary of study's Final Report.

More than a dozen highly qualified researchers contributed materially to the study, including professors working in regional economic development, transportation analysis, public administration, supply chain and data analytics; industry veterans from supply chain, trade and customs administration; and professional programmers, engineers, economists and communications specialists. We employed a variety of research methods including geographical information systems, supply chain analysis, transportation network modelling, economic modelling, survey research and policy analysis. Our conclusions are derived from a broad range of data including spatially detailed economic data for a study area encompassing the Great Lakes and St Lawrence River (GLSL) region, extensive digital models of transportation networks, GPS data records for a sample of more than 50,000 trucks and information gathered through our own public consultations that comprised two online surveys, a series of stakeholder round tables conducted on both sides of the border and face-to-face meetings with about 150 stakeholders, mostly representing the logistics industry, international shippers and public sector agencies. While our main focus is on the very large volume of commercial traffic that crosses the Canada-US border at the Detroit River, our analysis also included impacts on personal vehicles that will cross the border at the new Bridge.

Our study is focused on the permanent economic benefits that will arise due to improved cross-border transportation services that the new Bridge will provide once it is open. We do not consider the significant, but transitory employment benefits that will be realized during the construction period due to the hiring of construction workers, the purchase of services and materials, and the recirculation of new employment income in the local economy. Those benefits are assessed, along with a description of specific employment opportunities, in a recently released study by Workforce Windsor-Essex.<sup>1</sup>

As the title suggests, we make a distinction between two types of economic effects: *impacts*, which are benefits such as border crossing time reductions that will be realized as soon as the new Bridge comes into service, and *opportunities* for the development of new economic activities whose potential is unlocked by the improved accessibility provided by the new Bridge. An example of the latter is the potential to develop new logistics facilities on both sides of the border. The main point of identifying opportunities

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<sup>1</sup> The study *Bridging Our Workforce: A Guide for Jobs Related to the Gordie Howe International Bridge*, may be obtained at <https://www.workforcewindsorsex.com/bridge-jobs-guide/>

is to help define a public-private strategy to expand the economic benefits conferred by the Bridge.

### *Background*

Canada and the US have the second largest bilateral trade relationship on earth; exceeded only by the trade flows between the US and China. Discussions about Canada-US trade often focus on resource commodities, but manufactured goods account for more than half of the cross-border shipments of both countries. While commodities typically cross the border via pipelines, trains and marine vessels, most manufactured goods cross in trucks. Furthermore, a large share of manufacturing trade is in materials and parts that move between factories on both sides of the border. This integration of US and Canadian production systems in *cross-border supply chains* is one of the essential drivers of Canada – US trade, and greatly enhances the efficiency and competitiveness of the GLSL industrial complex. It depends on three distinct but interdependent requirements:

- *A strong business case for cross-border integration*, based on scale economies and the complementarities arising from diverse skills and resources.
- *A high level of cooperation between governments of the United States and Canada* as embodied in North American Free Trade Agreement (NAFTA), the Beyond the Border Action Plan and the Canada – US Regulatory Cooperation Council.
- *Adequate and integrated infrastructure capacity to facilitate cross-border freight movement*, to which the Gordie Howe International Bridge will be the most important addition since before the implementation of NAFTA.

The Gordie Howe International Bridge has greater economic significance than most other highway infrastructure elements, owing to its pivotal location in support of Canada-US trade. The Bridge will be placed at the nexus of the American and Canadian highway networks in the GLSL region and along the main corridor that connects the Canadian and the US automotive industry, which is the largest component of manufacturing trade. More trucks already cross the Ambassador Bridge in this corridor than at any other Canada-US crossing. (In fact, the volume of trade at this crossing is comparable to the largest North American marine ports.) Our data demonstrates that those trucks serve not only the Southwest Ontario – Southeast Michigan region, but extend far into both countries. For example, the largest source of trucks from Canada is the Greater Toronto Area and there are more trucks crossing with origins around Montreal than in Windsor-Essex. On the US side, a large share of truck shipments originate in Michigan and along the interstate highways west to Chicago and south into Kentucky and Tennessee. But there are also significant truck flows originating as far away as Laredo, Texas and Los Angeles, California. Many trucks carry goods in-transit from Mexico and from East Asia via West Coast US ports.

Cross-border automotive supply chains require fast and reliable crossing times. A vehicle assembly plant may be served by 1000 trucks per day, all of which must be synchronized to deliver parts within short time windows. This requires that deliveries must be not just

fast but also reliable. Unexpected delays at the border have the potential to undermine this level of synchronization, perhaps leading to production line shut-downs. But border agencies have mandates to protect the public that cannot be relaxed due to supply-chain considerations. Thus, border infrastructure that is adequate to both carry the large volume of traffic and facilitate the most efficient border processes is needed to support the binational automotive industries and other industries that depend on cross-border supply chains. Furthermore, interruption of service for the Ambassador Bridge, which is the sole means of cross-border truck movements at the Detroit River, could have huge economic implication, potentially idling plants on both sides of the border or causing severe extra costs if goods are rerouted across the Blue Water Bridge. This calls for more than one bridge to provide redundancy – taking such a scenario out of the picture. In other words, providing additional and separate crossing capacity will make cross-border supply chains resilient to extreme, unpredictable events such as an infrastructure failure, catastrophic accident, extreme weather or seismic event, or even a terrorist attack.

To summarize, the Windsor-Detroit crossing is the most important gateway to Canada's number one trade partner and also an important connection to the rest of the world. The dominance of this crossing owes much to the high level of supply chain integration between Canada and the US in the automotive industry. The long - term viability of automotive production in Canada depends on efficient, affordable, reliable and resilient infrastructure at the Windsor-Detroit crossing, as does the potential for increased cross-border integration in other industries. Recognizing these facts, governments and businesses on both sides of the border have long called for additional infrastructure investment at the Windsor-Detroit crossing.

### *Impacts*

The Gordie Howe International Bridge project must be viewed in conjunction with the recently completed Herb Gray Parkway project (see Figure 1). These two projects combined provide a once in a lifetime opportunity to transform one of the most economically consequential transportation infrastructure systems in the world. This transformation involves not only expanding the infrastructure, but also getting the connections right from the 401, to the Parkway, through the inspection plazas and their connections to the Bridge, and on to the interchange with the I-75, which is itself in the process of massive reconstruction and expansion.

The new Bridge will be a superior Detroit River crossing option for three reasons:

- First, when combined with the Herb Gray Parkway it will provide a freeway-to-freeway connection between Ontario's Highway 401 and US Interstate I-75.
- Second, it will have additional lane capacity and much larger inspection plazas on both sides of the border.
- Third, it will deploy the most sophisticated intelligent transportation systems (ITS) and border logistics and security technology currently available throughout the entire highway - plaza - bridge system, and it will be designed to easily accommodate new technologies that may emerge in the future.



Figure 1: Herb Gray Parkway and Gordie Howe International Bridge with inspection plazas

These three key characteristics of the Bridge will make crossing times both shorter and more reliable, saving about 850,000 hours per year for trucks, which translates into billions of dollars in economic savings over its service lifetime. Since the Ambassador Bridge (or its eventual replacement) will remain in place, the two bridges will provide needed redundancy. The presence of two bridges at the crossing essentially rules out the possibility of a complete shutdown of the Detroit River crossing, a scenario whereby traffic is diverted to the Blue Water Bridge costing over one half billion dollars' worth of excess time every year.

The average crossing time is not the only, or even the most relevant indicator from a scheduling perspective, because many of the carrier's costs and risks depend on the variability of crossing times. Our industry consultations indicate that the conventional approach to mitigating variability is to build substantial time buffers into truck schedules. Such buffers lead to many cases where the truck arrives at its destination early. The cost of being early, however, consists only in the truck and driver standing idle until the scheduled delivery time, while the cost of being late could be a large fine or even the loss of a contract. So trucks are typically scheduled to arrive early, which results in further excess hours.

We can define some broad mechanisms by which these service improvements due to the completion of the Gordie Howe International Bridge will affect the economy.

- Border crossing costs, like tariffs, are barriers to trade. It is well known that tariff reduction under trade agreements like NAFTA promotes trade. Border cost reduction that will come about after completion of the new Bridge will have a similar trade promotion effect. A regionally detailed general equilibrium model that was developed in this study projects substantial growth in trade between Ontario and

nearby states like Michigan as well as more distant states like California as a result of the savings in border crossing costs due to the new Bridge. This growth in Canada-US trade translates into aggregate economic growth, especially for Ontario.

- By providing redundancy, it will eliminate a significant risk that, according to our consultations, currently deters some businesses from making investments in facilities that depend on cross-border truck movements.
- While automotive supply chains are highly integrated across the border, retail and other supply chains are not. A faster, more reliable crossing with redundancy will make it attractive to create new cross-border supply chains, leading to scale economies and reduced logistics costs.
- The new Bridge will have a significant impact on the patterns of accessibility in the GLSL region, improving the market potential of new economic activities. Areas in SW Ontario, SE Michigan, NW Ohio and Eastern Indiana that gain the most cross-border accessibility are likely to experience new opportunities for growth. This is illustrated in figure 2, which shows the spatial distribution of the reduction in the average access time to automotive industry suppliers.
- Historically, major infrastructure additions have led to unexpected economic outcomes – for example, construction of the Ambassador Bridge contributed to the integration of the American and Canadian auto sectors. Over the next century, the Gordie Howe International Bridge is likely to produce similar unpredictable but economically significant outcomes.

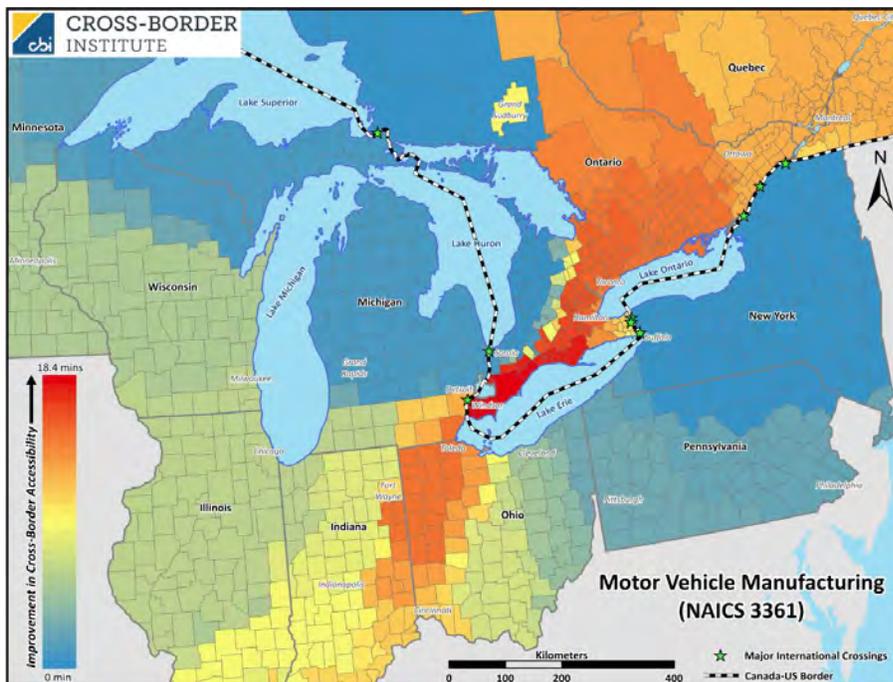


Figure 2: Average access time savings to industrial inputs for Motor Vehicle Manufacturing

All of these mechanisms play out in complex ways. For example, shorter and more reliable crossing times save money for carriers because they don't have to pay for excess fuel and wages while their truck is stuck in a queue. But since many trucks cross the border more than once a day, it can also increase the number of "turns" each truck makes daily, saving capital outlays for the carriers. Another consideration is that hours-of-service regulations stipulate that a driver cannot exceed a daily time limit in the cab. Time stuck at the border counts, and if a driver has just enough hours available to reach their destination, an extra hour at the border can translate into a 12 hour delivery delay because the driver has to stop and rest. Trucks moving parts in just-in-time supply chains have to make deliveries within narrowly defined time windows. If they miss their window because they were stuck at the border, the carrier may be subject to large fines. If there is no redundancy, an emergency scenario that shuts down the border bridge can lead to a detour of hundreds of kilometres. As we have already noted this can result in hundreds of millions dollars in extra costs for truckers, but it can also lead to the idling or even permanent closure of facilities whose cross-border accessibility is severely diminished. This puts thousands of jobs at risk. All of these possible costs and risks will be eliminated or greatly reduced by construction of the Gordie Howe International Bridge. (Much more detail on benefits is found in our full Final Report.)

### *Opportunities*

As we have noted, the distinction between impacts and opportunities is that impacts occur more or less automatically once the new Bridge is open, while opportunities typically require some additional actions by public sector players in order to be fully realized. Based on our background research and consultations with numerous industry players, we have concluded that the transportation, distribution and logistics (TDL) sector presents the most significant and attainable opportunities for the development of new economic activities or expansion of existing activities to be stimulated by the Gordie Howe International Bridge project. TDL activities include the physical movement and storage of goods, along with the associated communication and information processing, required to produce goods and services and deliver them to their final purchasers. This involves a variety of businesses operating out of facilities that could be located in the binational border region, including: truck yards for carriers who move the goods; intermodal facilities where containers are transferred between modes, such as truck and rail; warehouse, cross-dock, fulfillment and express hub facilities where goods are transferred between vehicles, sometimes stored, and dispatched to their final destinations; special climate controlled warehouses that accommodate the storage and movement of temperature-sensitive goods in sectors including agri-food and pharmaceuticals; facilities such as truck stops that serve the needs of passing trucks and their drivers; and the headquarters of business intermediaries such as customs brokers and freight forwarders. These diverse firms operating out of specialized facilities are highly interconnected, so they often co-locate in *TDL clusters* in which all the needs of freight activities can be met within a compact area.

As we have argued throughout our impact analysis, the improved accessibility provided by the Gordie Howe International Bridge will benefit all goods production industries that



trade between Canada and the US. Why, then, in identifying opportunities are we placing a strong focus on TDL, which is a service industry? In brief, our focus arises from the following three factors:

1. *Geographical Focus:* The economic benefits to goods producers who use the new bridge are geographically dispersed. For example, a manufacturer who ships goods into the US via the new Bridge will have the same per-truckload saving whether it is located in Windsor-Essex, in the Greater Toronto Area or even in Quebec. This is a good thing – one reason that the economic impacts are so large and pervasive is that they extend far from the Detroit River crossing. However, economic initiatives – especially those related to the production and movement of goods – are more easily organized and implemented on a regional basis. For reasons discussed under factor 2, the addition of the New Bridge creates a relatively compact region of enhanced potential for TDL development.
2. *Traffic Flow as a Market Asset:* Because there are relatively few border crossings in the bi-national GLSL Region, each crossing funnels a huge volume of trucks and cars through a narrow corridor. While pejorative terms such as *bottleneck* and *choke-point* are often used, such a concentration creates a valuable market asset for communities adjacent to the crossing. The strategy of the TDL cluster development we are proposing views the flow of trucks as a rolling market, to which a variety of services can be provided by regional businesses. While TDL industries based in most regions are dependent on local demand, such industries located in SE Michigan and SW Ontario can serve a much larger North American demand. (We expand on this point below, and in much greater detail in the *Final Report*.)
3. *Significance of the new crossing configuration.* Since there is already a very large flow of trucks through the Detroit River crossing, why does the addition of the New Bridge substantially enhance the potential for TDL development? For one thing, we anticipate that the improved crossing performance will have a positive effect on the flow. But more importantly, the realignment of access routes to the border, especially on the Canadian side (see figure 1), will make more sites available with direct access to major highways. This will provide opportunities for TDL development that are commercially attractive but also have minimal impact on local traffic and are sensitive to potential land use conflicts including environmental concerns.

Factor 2 is especially important because it defines the economic rationale for TDL development. We can illustrate how the cross-border flow of trucks represents a market asset through the example of a common logistics facility called a *cross-dock*. A cross-dock facility receives and redirects goods without putting them into storage. For example, a truck from Indianapolis carrying goods bound for all destinations in Ontario may arrive at the cross-dock, where its freight is broken up and transferred to separate trucks bound for London, Toronto, St. Catharines etc. Each destination-specific truck will take on freight from several trucks arriving from different points of origin: e.g. Indianapolis, Cincinnati, Grand Rapids, etc. There may not be enough freight to fill a truck between many origin-destination pairs. But by consolidating all the Ontario-bound freight from each US

destination into a single truck and bringing it to a cross-dock facility where it is temporarily unloaded and then reconsolidated into trucks bound for specific Ontario destinations, it is often possible to fill trucks, making delivery cheaper and more environment-friendly. (Note that this is similar to the function of a hub airport, where flying people in from a number of different origins and transferring them to planes to various destinations serves the purpose of filling planes.)

A successful cross-dock must be located where it can serve trucks from many different origins carrying freight bound for many different destinations. Therefore, it should be located at a point in the highway network where a wide variety of origin-destination truck routes come together. Because the border crossing funnels diverse truck movements through a narrow corridor, it creates such a point.

Even in such an ideal location, the potential to locate a major cross-dock facility depends on rather demanding site requirements. Because it must accommodate a large number of trucks without too much congestion, and because it must have sufficient interior space to efficiently move freight between trucks, it requires a large site. Also, because the cross-dock attracts many trucks it should be located directly adjacent to one or more major highways. Not only are such locations preferred by truck carriers, they also avoid land use conflicts by eliminating the need for trucks to access the facility via municipal roads. Since emissions from trucks are much higher when they are moving in stop-and-go city traffic, keeping cross-dock facilities within highway corridors also minimizes the negative environmental and health impacts from truck-related activities. When compared with the current route for border access, the new crossing configuration *via* the Herb Gray Parkway and the Gordie Howe International Bridge makes many more such appropriate sites available, although in some cases complementary infrastructure such as access roads, water and sewage are needed to make the sites viable. While our cross-dock example is for a specific type of facility, it is generalizable because other logistics facilities (e.g. cold storage, bulk load facilities, distribution centres, etc.) have similar location priorities.

On the basis of the three factors above, we conclude that the construction of the Gordie Howe International Bridge greatly enhances the business case for the establishment of a logistics intensive cluster on both sides of the border at the Detroit-Windsor crossing. A number of additional factors reinforce this conclusion:

- the new Bridge is reasonably close to road/rail intermodal facilities in Michigan and Ohio that can be linked to the logistics cluster via the draying of containers by truck, thus providing local access to major rail and shipping lanes;
- the regional experience in automotive and other logistics-intensive industries provides a base of facilities and skills to build on, and;

- Locations close the Bridge will provide opportunities for border-related services, such as on-site inspection and services to help address the shortage of cross-border drivers.

Another reason for our focus on TDL activities for the “opportunities” aspect of this study is that concerted and coordinated effort by public and private sector actors is necessary to spur economic growth in this sector. Economic growth in goods producing industries may be expected to arise principally through economic mechanisms. As cross-border transportation costs are reduced, producers become more competitive and may be expected to grow. Reducing the economic impediment of the border helps the most efficient firms capture a larger share of the bi-national market, leading to scale economies and productivity growth. New institutional arrangements are not necessary to trigger this type of economic benefit. The concentrated flow of personal vehicles from the bridge will provide an expanded market for retail, hospitality and tourism services. However, mechanisms for retail and hospitality development and regional tourism agencies are already in place to take advantage of this expanded market.

On the other hand, our study concludes that creation of a TDL cluster will require the establishment of a new coordinating institution on each side of the Detroit River, with an international board or committee to ensure that the TDL cluster activities in the US and Canada develop in a consistent and complementary fashion. These new institutions must have responsibilities and authority with respect to land conversion and servicing, environmental assessments, community consultation and other processes that need public sector input. It will also require private sector partnerships and coordination to achieve a critical mass of investment and expertise. Until such new private-public institutional arrangements are in place, the TDL opportunity cannot be transformed into substantial economic benefit. Thus, our focus on TDL development does not suggest that economic growth in other sectors is somehow less important but rather, consistent with our definition of the distinction between impacts and opportunities, that a new public-private strategy and supporting institutional structure is necessary to exploit the full potential for growth in TDL activities.

Experts in logistics and distribution site selection have said that in the current economic environment, local workforce resources have emerged as the decisive factor in many development choices. The ability to marshal workforce resources and demonstrate their availability to potential investors will therefore be a key for the success of any logistics cluster.

The fact that there is good potential for development in a particular economic sector does not, in itself, justify setting such development as a regional economic development priority. It must also be the case that activity in that sector will yield substantial economic benefit to the people in the region. We conclude that the establishment of a TDL intensive

cluster will provide great economic benefits to the region on both sides of the border because:

- TDL activities provide employment opportunities that can be filled by workers from both countries who may be displaced from manufacturing;
- growth in TDL services will enhance the competitiveness of other industries in the region, including manufacturing, agrifood and e-commerce;
- Logistics facilities, combined with the improved cross-border flow via the new bridge, will more effectively connect the Detroit-Windsor region not only to North American road and rail networks, but also to global shipping lanes;
- Negative environmental impacts from TDL or any other economic activity can offset the value of economic benefits. However, because of the opportunity to limit facilities development to sites within the highway corridors, emission can be kept to a minimum and provision of buffer spaces can minimize land use conflicts; and
- TDL supports a full range of jobs from routine tasks to highly advanced jobs in information and communications technology. Its benefits are therefore available to a wide cross section of the local population.

The last point is especially important. There is a popular, but erroneous, perception that TDL industries are “low tech.” In fact, this economic sector is currently experiencing a technological transformation. Not only are industry giants such as Amazon, Maersk, UPS and FedEx making huge investments in technology to speed goods movement, reduce costs and preserve information on chain of possession to provide traceability, a new wave of start-ups employing artificial intelligence, blockchain, geomatics and other technologies plays an increasing role in the TDL sector. Technological innovation by these firms is highly complementary to the tasks of border agencies, who must collect, process and manage huge volumes of data on the goods and people passing through their ports of entries. The juxtaposition of a cluster of innovative TDL facilities with one of the most important land border crossings on earth provides the ideal environment for a technological revolution in border operations, nurturing the development of a specialized technology cluster on both sides of the border.

Developing a TDL cluster is not without its challenges. For example, its future growth will depend on continued Canada-US economic integration through cross-border supply chains. Also, since TDL activities are land intensive great care and public consultation will be necessary to protect the regional environment. But these challenges can be overcome. Communities on both sides of the Detroit River must not miss the opportunity to translate the creation of an infrastructure link with global significance into the maximum local economic benefit.

Environmental priorities must be defined at the outset and strategies to uphold those priorities must be built into all aspects of planning and implementation. TDL activities can have negative environmental impacts for various reasons: the trucks that they serve make a major contribution to greenhouse gas emissions and urban pollution; TDL sites require creation of impermeable surfaces that can affect stormwater runoff; the negative impacts of TDL activities often fall disproportionately on adjacent communities. With careful planning and selective development these impacts can be minimized. The cluster can offer services that reduce trucking emissions by eliminating the movement of empty or partially empty trucks, promoting intermodal transfers from truck to rail, and supporting the increased use of electric, alternate fuel and automated trucks. Selective placement of TDL sites, along with the use of best practice methods such as permeable pavements and natural filters and buffers can mitigate runoff and other local environmental impacts. Since the cluster (especially on the Canadian side) will serve mostly through traffic, as opposed to local traffic, it should be possible to locate facilities in and adjacent to the corridor created by the Highway 401, Gordie Howe International Bridge and its ports of entry, the Interstate highway I-75 and possibly a few other major highways. By restricting sites to this corridor, the use of municipal roads by trucks accessing the TDL facilities will be minimized. Local trucks accessing the facilities should be restricted to routes that bypass population centres and environmentally sensitive areas.

The history of regional development efforts in North America is littered with proposed logistics intensive clusters that never came to fruition. It is much easier to define the business case for a cluster than to create the necessary momentum for its establishment. Our review of North American cases indicates that, while there are some success stories where either the private or public sector took the lead, the most successful and applicable examples followed a model of private-public cooperation. (A review of relevant cases can be found in the *Final Report*.) There is a great deal of ground work needed to ensure that the process of cluster development is well under way by the time trucks start rolling across the Gordie Howe International Bridge.

### *Conclusions on TDL Development*

Our conclusions regarding the development of a transportation, distribution and logistics cluster as a means of exploiting opportunities created by the new Gordie Howe International Bridge may be summarized as follows.

- Our analysis and consultations indicate that a strong business case can be made for the development of a binational TDL cluster on lands with good access to both POEs of the Gordie Howe International Bridge. Since this business case depends in part on “flow-through” traffic, the cluster must be developed around the provision

of logistics services that facilitate cross-border movement, rather than facilities that serve only local supply and demand.

- The development of a TDL cluster will have significant benefits for the SW Ontario / SE Michigan region, including providing good job for a broad cross-section of local employees, enhancing the economic competitive of regional firms in manufacturing, agri-food and other sectors, and promoting development of a technology cluster based around the information and communications interface between TDL activities and border processing.
- Our analysis and consultations indicate that certain categories of logistics facilities have the greatest potential for success in border region. These include crossdocks, truck stops, container processing centres linked to existing US intermodal facilities, specialized facilities in support of cross-border e-commerce and climate controlled facilities with on-site food inspection areas.
- Development of the cluster should be on a private-public model. It is critical to avoid creating facilities that will not attract enough business to cover their full costs. The best way to ensure against such an outcome is to support only the development of facilities and activities in which private logistics service providers commit to making substantial investment. (In other words, avoid building “on spec.”)
- Since it unlikely that any single entity will provide all the services in the cluster, some type of private-public coordinating institution will be needed. While the logistics cluster should be designed as an integrated whole spanning the border, a single binational coordinating institution is unlikely to have the necessary powers to implement land development. Therefore, a hybrid structure with a binational institution that serves to coordinate the activities of two national institutions is the most practical option.
- Cluster development on both sides of the border should be guided by both the potential for commercial success and the social objectives of environmental preservation, the creation of high-quality employment opportunities and conferring significant net benefits (economic, social and environmental) on adjacent neighbourhoods.
- TDL sites should be limited to locations in or adjacent to the corridor comprising the Ontario Highway 401, The Gordie Howe International Bridge and its POEs, The US Interstate Highway I-75 and perhaps other significant highways. Movement of flow-through truck traffic over municipal roads to access cluster facilities should be minimized, and local trucks accessing these facilities should be routed around residential and environmentally sensitive areas.
- Drawing on the experience of the Gordie Howe International Bridge POEs, all TDL cluster facilities should adopt best environmental practices, with the goal of meeting or exceeding ISO 14000 standards for environmental management. Full services should be made available for alternative fuel, electric and automated trucks.
- The cluster should embody advanced technology. Common hardware and software assets for rapid compliance and clearance at the border; advanced tracking and traceability; load matching and similar platforms for marketing and

collaboration in logistics services; and the collection and management of marketable data should be a distinguishing characteristic of the cluster.

Prior to establishment of the bi-national and national coordinating institutions, an *ad hoc* committee should be struck to develop an action plan. (The mandate of the committee is described below).

The *ad hoc* committee should be binational and composed of representatives of interested groups such as community groups; broadly defined business groups (such as Chambers of Commerce) and representatives of key industries such as supply chain, automotive and agriculture; regional economic development agencies and municipalities; infrastructure authorities (ports, airports, bridges, tunnels); and state, provincial and federal agencies.

The committee's mandate will include defining the scope and geographical extent of the logistics cluster initiative; defining the mandates and governance of coordinating institutions for the development and operation of the cluster; initiating the development of land use, capital and common service plans; and establishing timelines for the work of the coordinating institutions and the progress toward an operational logistics intensive cluster.

In addition to participating in the governance of the cluster, certain civic organizations and institutions will play especially important roles in its assuring its success and in assuring that its benefits are inclusive and environment-friendly. These include regional development agencies, who will help attract cluster members and other firms who can benefit from the presence of the cluster; regional environment/conservation authorities, who will ensure that environmental priorities are upheld, and workforce development agencies, who will work to ensure that the human resources requirements of the cluster can be met from the local labour force. Chambers of commerce and other regional business groups will serve as important conduits for expressing the needs and preferences of the business community to the cluster development process.

As noted earlier, the coordinating institutions will most likely include some binational entity with separate entities endowed with development powers on either side of the border. (However, this will be up to the *ad hoc* committee to determine.) The common service plans will address special facilities available to cluster members such as advanced IT systems.

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By significantly improving connectivity at the most important corridor for goods movement in the huge Canada-US bilateral trade relationship, the Gordie Howe International Bridge projects represents one of the most important initiatives for trade facilitation in the world today. It will not only save billions of dollars for the trade movements that currently pass through the Windsor-Detroit corridor, it will improve cross-border accessibility throughout the Great Lakes and St. Lawrence region, facilitating growth in mutually beneficial cross-border trade. By creating a more reliable and resilient border, it will provide the level of certainty necessary to induce investments in productive assets in both Canada and the United States. It will also create a zone of high cross-border accessibility and freight flow, providing the opportunity to build a cluster of transportation, distribution and logistics



activities that can expand the economic base and employment level in Southeastern Michigan and Southwestern Ontario.



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