Advancing Southwestern Ontario's Public Transportation Opportunities





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### **OVERVIEW**

If we want to boost productivity and grow our economy, we need to build a seamless transportation network across the province.

Premier Kathleen Wynne Moving Ontario Forward April 17, 2014



#### We could not agree more!

Mobility is one of the keys to economic, social and environmental prosperity. It affects where people choose to live and work. In turn, this influences where businesses locate. In an increasingly competitive world, highly mobile regions are the ones that succeed in attracting residents, investment and a skilled workforce.

There is no one-size-fits-all mobility solution. A complete and balanced system that offers maximum convenience and choice requires three types of transportation:

- Active (walking and cycling)
- Private (cars, roads and highways)
- Public (rail, air, inter-community buses and local transit)



In Southwestern Ontario today – as in many other North American regions – mobility is neither complete or balanced because the public transportation system has not been developed to its full potential. The result is a lack of alternatives to car travel.

Designing, building and delivering a complete and integrated public transportation system that can correct this situation is a complex process that is somewhat like assembling a giant jigsaw puzzle. Each piece must be precisely shaped and all must interlock to form a seamless picture.

In Southwestern Ontario, some of the pieces of the public transportation puzzle are already in place, but they require innovative development. Others are still absent.

Complicating the process is the ownership of the individual pieces, which is scattered among all levels of government and includes some private stakeholders.

This tool kit has been prepared to assist Southwestern Ontarians in seizing several opportunities presented by upcoming public policy and funding decisions concerning the future of our national and provincial transportation systems. It is intended as a guide to building the type of public transportation system that will contribute significantly to this region's competitiveness and long-term sustainability.

As large as this job will be, it cannot be avoided. Other regions throughout North America are now addressing their own public transportation challenges to remake themselves as preferred places to live, work and invest.

For Southwestern Ontario, the choice is not whether we can afford to undertake this task, but whether we can afford not to – and how do we ensure we receive the most value from our investment.





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### **PARTNERSHIPS**

While each piece of the complete public transportation puzzle is important in itself, there is one puzzle piece that is central to the whole concept and must precede the development of the others. This puzzle piece is a partnership approach to policy, planning, funding and service delivery. Without partnerships, an effective and seamless system that makes the maximum use of each mode is impossible.

A failure to develop and nurture partnerships has played a key role in the evolution of the current Southwestern Ontario public transportation system. Each mode, operating under scattered legislation, ownership and funding, has been developed largely in isolation and without regard for the others. The result has been a disjointed system where the individual pieces rarely connect operationally, legislatively or institutionally. Each service provider – public or private – strives to maximize their own piece of the puzzle, but none benefits from the full potential that is attainable by coordinating and connecting their services. The result has been a situation where publicly- and privately-funded operators overlap and compete for those travellers who use public transportation for their intra- and inter-regional trips.

This situation is not unique to Southwestern Ontario. The failure to link the policies, plans and funding of numerous service providers in regions across North America partially accounts for public transportation's generally low share of the travel market continent-wide. However, some progressive U.S. regions are now meeting this challenge – and with impressive ridership, revenue and cost-recovery results.

In re-envisioning Southwestern Ontario's public transportation system, a useful model could be the one employed on three rail corridors in California. Using a joint powers authority approach, these corridors have been recast as jointly funded, managed and operated partnerships between the federal, state, regional and municipal governments, and the providers of the rail, inter-community bus and transit services.

Alternative partnership models have been applied to other rail-based corridors in regions as diverse as Northern New England, North Carolina and the Pacific Northwest. In each case, the creation of these innovative multi-modal partnerships was driven by the realization by one or more of the affected governments that a "business as usual" approach was not acceptable. This leadership and the buyin of the other partners produced the innovative governance, management and service delivery techniques that have cut across the self-imposed jurisdictional and modal boundaries of the past.

Only with leadership and partnerships that include the federal, provincial and municipal governments, Crown corporations and public agencies, and the service providers (including the freight railways) can Southwestern Ontario craft and connect the pieces required to create its own multi-modal public transportation puzzle.

In Southwestern Ontario, some of the pieces of the public transportation puzzle are already in place, but they require innovative development. Others are still absent.



The partnership approach provides travellers with direct connections between intercity trains, inter-community buses and local transit in many California communities. Photo courtesy of Amtrak.





### **MULTI-MODAL TERMINALS**

Multi-modal terminals provide the piece of the public transportation puzzle that physically connects and integrates all the others by making passenger transfers between the modes simple, barrier-free and fast.

As well, multi-modal terminals provide for those who make use of the car for a portion of their journey by including ample parking and passenger drop-off and pick-up facilities. Ideally, they should also contain retail outlets where passengers can purchase goods that make a multi-modal public transportation journey more appealing, such as food and beverages.

When multi-modal terminals are accompanied by appropriate zoning for the surrounding land within a distance of approximately 800 metres, their high activity levels can make them generators of transit-oriented residential and commercial development. This transforms these terminals into what is defined as a mobility hub.

An example of an effective multi-modal terminal that is now emerging as a mobility hub is the municipally-owned Guelph Central Station. Serving as the timed interchange point for several Guelph Transit routes, it also accommodates VIA Rail, GO rail and bus service, and Greyhound. This \$8-million facility, which includes the city's historic railway station, is an integral part of Guelph's downtown revitalization plan.

A similar approach is being taken in the development of the new Kitchener multi-modal terminal to connect Waterloo Region's light rail transit line with other urban transit routes, VIA, GO Transit and privately-operated bus services.

Amtrak

Elsewhere in Southwestern Ontario, few attempts have been made by any of the service providers to develop multi-modal terminals that could eventually blossom into mobility hubs. While there are many locations where the various public modes come in close contact with each other, they do not share facilities and there is no service integration. Such impediments discourage public transportation usage.

The successful rail-based corridor development projects in many regions of the U.S. are examples of how multi-modal terminal planning and development can be a catalyst for intermodal and inter-governmental cooperation. By acquiring and refitting existing railway stations as multi-modal terminals, municipalities and state agencies have been able to encourage service providers to consolidate operations to eliminate the cost of providing their own stand-alone facilities. The benefits have flowed to passengers, the operators and the public agencies that have initiated these projects.

An integrated, multi-modal public transportation strategy for Southwestern Ontario will only realize its full potential if multi-modal terminal development is a major and early component of it.



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Woodstock Transit. Bruce Chessell, Woodstock Sentinel Review

### **URBAN TRANSIT**

The role of urban transit in addressing local mobility needs and making communities less dependent on the car is obvious. Its quantity and quality are increasing as factors in the decisions people make about where they want to live and work, and where businesses choose to invest.

As a piece of the regional public transportation puzzle, urban transit has an equally important role to play. It supplies the "first and last mile" component of car-free intercity and inter-regional journeys. A traveller's decision to drive or use public transportation for their full journey may hinge on urban transit's frequency, ease of access, geographic coverage and connectivity with the other public modes.

Without adequate urban transit as part of a seamless travel package, each mode's

effectiveness in providing an alternative to the car is compromised.

However, delivering enhanced urban transit is a challenge. While many municipalities recognize the need to increase their transit service coverage and frequency, the increased capital and operating costs have been barriers. Recent federal and provincial funding contributions to transit have, to date, eased this problem marginally.

Compounding this is the general infrequency of intercity service in Southwestern Ontario. Reductions to VIA Rail Canada and privatelyoperated inter-community bus services have only made the situation worse. As a result, investing in improvements to urban transit to act as a feeder to the intercity modes has been difficult to justify.



City of London: Shift.

Despite these challenges, some Southwestern Ontario cities are engaged in projects that will boost urban transit's role as a component of the public transportation system on a regional basis.

The 2012 revamping of Guelph Transit placed a heavy emphasis on the "hubbing" of its routes at the municipally-owned Guelph Central Station, which provides direct connections with GO, VIA and private bus services.

When completed in 2017, Waterloo Region's high-frequency light rail transit line will provide a direct connection with the intercity modes in downtown Kitchener.

In other communities, current studies of urban transit improvements provide more opportunities to consider how it can better perform as part of a seamless, region-wide system. Notable among these is the Shift initiative, which will define a new transit vision and implementation strategy for London.

As has been demonstrated in several U.S. regions, urban transit is an indispensable component of a successful multi-modal public transportation system. To make this a reality in Southwestern Ontario, municipal transit providers will require significant financial support from the upper levels of government.





### **INTER-COMMUNITY BUS SERVICE**

Southwestern Ontario was once served by a web of privately-operated bus routes that connected more than 100 large and small communities.

Today, this network has declined to one that largely provides low-cost, no-frills travel between main points along the Highway 401 corridor. Gone are the light-density feeder services that were crosssubsidized by the main routes and which often provided the only public transportation option for many smaller communities.

The reasons for the contraction of Southwestern Ontario's bus service are many. In the opinion of the industry itself, these include a lack of connections to the other modes, competition from publicly-funded carriers such as VIA Rail Canada and GO Transit, and a provincial regulatory system that prevents innovation and increases costs.

At its root, the bus industry's problem is the same one experienced by rail and transit operators: the car. Even though it is highly dependent on public subsidies, car travel is still perceived by many as inexpensive, convenient and comfortable.

Another factor in the declining appeal of bus travel is the attractiveness of more spacious and comfortable passenger trains for intercity trips of more than 100 km.

However, the bus does have an important role to play in a regional public transportation system. It is well suited for inter-community and rural routes where rail service would exceed the requirements or there are no longer tracks on which to operate.

The usefulness of inter-community bus service as part of a multi-model system is demonstrated by several successful regional public transportation networks in the U.S. As feeders to the core intercity rail passenger services, these bus routes provide a rural version of the "first and last mile" service transit delivers in urban areas. They also provide stand-alone mobility for those who are not travelling onward by train and are only journeying between the communities the buses serve.

The U.S. inter-community bus services have resulted from partnerships between public agencies and private operators. Low-cost initiatives to launch new or sustain existing bus routes have included direct operating grants, guarantees against operating short falls, lowinterest loans or grants for new buses and the provision of publicly-funded intermodal terminals, where passengers may connect with rail and transit services.

The opportunity to test such an approach in Southwestern Ontario may be at hand. The provincial government has said it will provide funding to assist local governments with pilot programs to improve rural and inter-community mobility. Test projects have previously been launched in a handful of counties throughout the province.

If Southwestern Ontario's public transportation system is to be complete, inter-community bus service is a major – and currently deficient – piece of the puzzle.



Photo courtesy of the Ontario Motor Coach Association



### **GO TRANSIT**

Although it only serves Southwestern Ontario east of Kitchener, the GO Transit rail and bus services provided by provincially-owned Metrolinx have an impact on the region's public transportation system, including the areas west of GO's service territory.

Started as a one-line rail service on the Lakeshore Line in 1967, GO has grown into a Toronto-centred, multi-route rail and bus network blanketing the Greater Toronto and Hamilton Area (GTHA). The service levels on this expanded system vary by route, some operating only for weekday am/pm peak trips in and out of Toronto.

For Southwestern Ontarians, the GO routes that have the greatest impact are the rail and bus services to Kitchener, Guelph and Barrie, and the all-day Lakeshore rail service to Aldershot. All are likely to be expanded over the next decade under the \$29-billion Moving Ontario Forward program. The weekday-only Kitchener rail service will eventually operate frequently in both directions daily. Electrification and upgrading of the Lakeshore Line will provide faster and more frequent service.

Of these two GO routes, the Lakeshore Line currently provides the largest benefits to

Southwestern Ontarians. Many who previously drove to and from Toronto can now avoid some of the GTHA's highway congestion by parking at Aldershot and completing their journey by GO. As well, the direct connections made with VIA Rail Canada's Windsor-London-Toronto trains at the shared Aldershot and Oakville stations allows passengers to use GO to reach intermediate points. VIA passengers from Southwestern Ontario may also connect with other GO rail and bus routes at Toronto Union Station.

However, the introduction of GO Kitchener rail and bus services have also had a negative effect on some Southwestern Ontario communities. These routes compete with those traditionally operated to Kitchener and points west by VIA and private bus operators. This competition has resulted in a reduction in the VIA service through Kitchener to London and Sarnia. It has also been a contributor to the termination by the bus operators of unprofitable Southwestern Ontario routes, which were cross-subsidized by the profitable routes on which GO is now competing.

While GO's planned expansion will improve mobility in the easternmost section of





Southwestern Ontario, it should not be done in a manner that will destabilize and reduce the services provided by other operators, particularly on the portions of their routes that extend west of Kitchener.

The opportunity to safeguard these services is through the current review of the Metrolinx Act, 2006. Revising the legislation to include mandatory consultation and coordination with existing carriers is one possible means of ensuring GO expansion benefits many and harms none.



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HIGH-PERFORMANCE RAIL

### **HIGH-PERFORMANCE RAIL**

Fast, frequent and affordable intercity rail passenger service is at the core of the many integrated public transportation systems now operating in thriving regions around the world. For a variety of financial, institutional and operational factors, federally-operated VIA Rail Canada has never had the opportunity to deliver comparable levels of service. The result is that VIA's two Southwestern Ontario routes are not performing up to their full potential, although both do provide a necessary and useful service. Worldwide experience has demonstrated that an approach known as high-performance rail (HPR) is an effective option for optimizing rail as part of a multi-modal public transportation system. It is a proven middle ground between VIA's current service, which largely operates at speeds up to 160 km/hour on tracks it shares with freight trains, and high-speed rail (HSR), which operates at speeds of 240 km/hour or higher on new, electrified lines dedicated solely to passenger service.

**HPR** incrementally improves all aspects of a conventional rail service and builds on the public funds previously invested in it. Operating at speeds up to 200 km/hour with modern locomotives and rolling stock, HPR offers:

- Increased frequency
- Reduced door-to-door travel times
  - Enhanced comfort and onboard amenities
  - Better on-time performance and all-weather reliability
- Improved, fully-accessible stations
  - More and better local and regional transit connections

HPR is often described as an affordable nearterm option that can be used to build the market demand that will lead to a more intensive HSR service in the future. A major advantage of HPR is that it delivers improvements at each step along a phased and affordable pathway to faster and more frequent service. Where the conditions warrant it, HPR can also be converted from diesel to electric propulsion.

The HPR approach is being taken on several U.S. corridors with distances, demographics and operating conditions similar to those found on VIA's Southwestern Ontario routes. The result has been ridership and cost recovery improvements that demonstrate the ability of a modernized rail service to provide an alternative to car travel, especially in coordination with improvements to the other modes of public transportation.

With the federal government now reviewing its rail passenger options, and the provincial government studying a potential Toronto-London-Windsor HSR line, the opportunity exists for HPR to be analyzed and considered for Southwestern Ontario.



There are currently six high-performance rail corridors in the U.S. and more than a dozen are under development. Photo courtesy of Amtrak



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HIGH-SPEED RAIL



### **HIGH-SPEED RAIL**

High-speed rail (HSR) is the ultimate evolution of intercity rail passenger service, undertaken generally when original rail lines have reached their speed and capacity limits. Introduced in Japan in 1964, HSR has since been implemented on high-volume corridors in 13 other Asian and European countries. Several more HSR routes are now under construction or being planned worldwide.

HSR is defined by the U.S. Department of Transportation as a frequent express service with top speeds of at least 240 km/h between major centres that are 300-1,000 km apart, with few

German 280-km/h Inter-City Express high-speed train

intermediate stops. HSR trains are electrically powered and operate on fully grade-separated, dedicated rights-of-way, although they often share track with other types of rail traffic in constrained urban terminal areas.

Because of the need for new and straighter alignments than on the original lines, HSR involves costly and time-consuming right-ofway acquisition and infrastructure construction. It must, therefore, be predicated on its ability to attract large numbers of passengers from the other modes, as well as inducing additional travel demand.



Bombardier's 240-km/h Acela Express on Amtrak's Northeast Corridor. Photo courtesy of Amtrak

HSR has been studied numerous times since the 1970s for possible application to all or portions of the Quebec-Windsor Corridor. Each study determined it was technically feasible and could yield mobility benefits, but it would require substantial public funding and would likely attract only limited private-sector investment.

In 2014, the Government of Ontario announced its intention to re-examine HSR's potential in Southwestern Ontario and initiated a preliminary environment assessment (EA) for a 300-km/h HSR line linking Toronto, Pearson International Airport, Kitchener, London and Windsor. The project has been entrusted to former Minister of Transport David Collenette, who will provide recommendations to the province in late 2016.

In addition to the EA, a business case analysis that includes 200-km/h diesel and electric alternatives has been commissioned. These lower-speed services would more accurately be described as high-performance rail, not HSR. All three options being studied would involve the upgrading of portions of the existing rail corridors and the construction of "greenfield" line segments, including a new Kitchener-London route.

As has been demonstrated in other regions, HSR in Southwestern Ontario would require and support improvements to connecting rail, intercommunity bus and urban transit systems to act as high-volume feeders. Also to be considered would be the retention and improvement of the existing rail passenger services for those communities that would be bypassed by the new HSR service.

The current EA and business case analysis of HSR provide an opportunity for all levels of government to co-operatively address the requirements and the benefits of a multi-modal public transportation system for Southwestern Ontario.



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