

Ontario on the Move: Put Infrastructure Where it's Needed

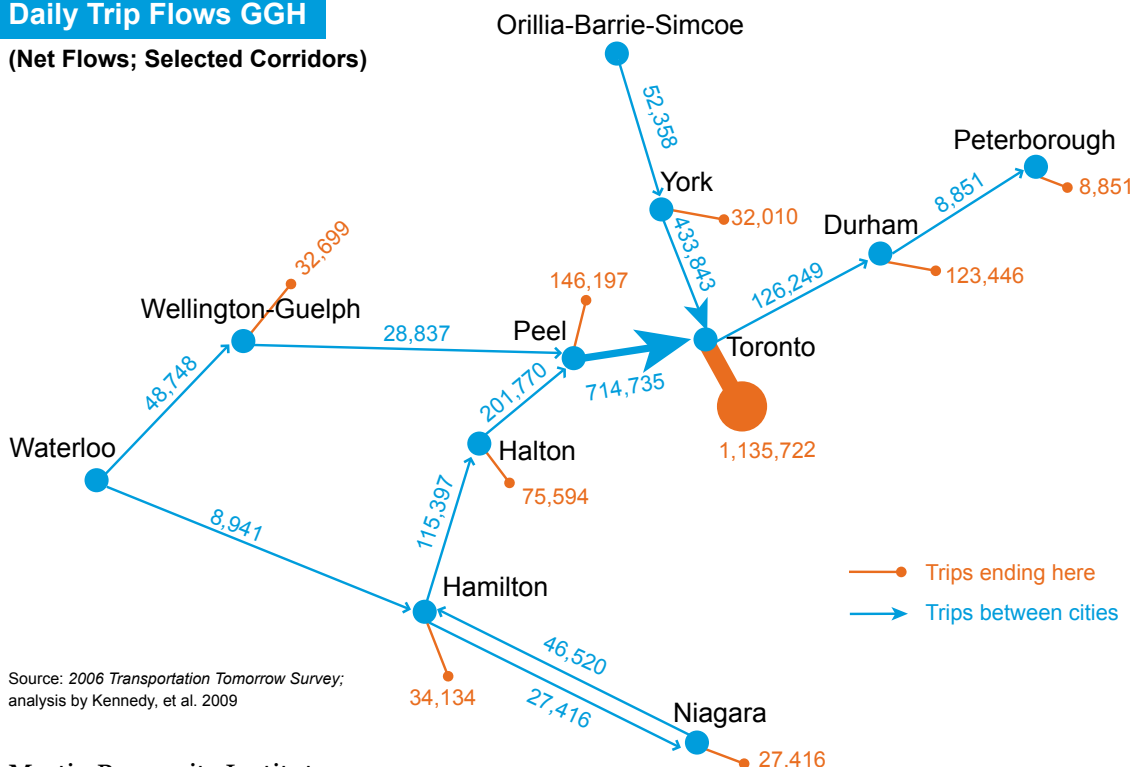
Economic history has shown that changes in infrastructure systems have often underlain phases of significant economic growth. Railroads in the 19th century, highway systems of the 1960s, and the internet infrastructure of the late 20th century are prime examples. The innovation that gives rise to new infrastructure systems is often a response to severe stress and is often driven by desperate circumstances. Ontario's opportunity lies not in reacting to a crisis but in proactively investing in the infrastructure necessary for future success.

The infrastructure for the creative age should focus on creating quality of place to attract talented workers. Physical/geographic expansion of Ontario cities will slow, but the connectivity of the cities needs to increase. New growth occurs through intensification in cities around transit corridors. The need for high-speed transport with low environmental impact positions high-speed electric rail corridors as viable systems to reduce the use of automobiles; these systems will be further balanced by growth in local light-rail, streetcar and cycling networks. Activity nodes are greened and pedestrianized.

Using 2006 Transportation Tomorrow Survey data, the figure illustrates the daily flows on selected corridors. While these trip flows might be expected to increase by around 20 percent by 2021, the selected corridors show that even currently, trip flows justify improvement of the current infrastructure. The availability of a fast and reliable train service with convenient schedules will attract an increased number of riders.

Daily Trip Flows GGH

(Net Flows; Selected Corridors)



A high-speed rail system would replace and extend existing VIA Rail services, providing high frequency, reliable express connections throughout the Greater Golden Horseshoe (GGH) and beyond. It would be overlaid on and interfaced with local and regional transit services. In particular, each high-speed rail station would be a “mobility hub” with integrated connections with local transit (bus, light rail, bus rapid transit, etc.) and commuter rail systems that would provide local connectivity to trip origins and destinations throughout the region. The figure also illustrates the need for direct connectivity between centres other than downtown Toronto, both to promote growth within and interaction among these other centres and to provide efficient service that can at least be competitive with direct auto travel, if not a substitute.

Although very preliminary and conceptual in nature, potential corridors could provide high-order, high-speed rail connectivity between major GGH centres, and between the GGH as a whole and the rest of Ontario, Canada and North America. A wide range of train technologies are available for this purpose, and average speeds can range from 130 km/h to more than 250 km/h while top speeds can exceed 400 km/h. At an average speed of 150 Km/h, the travel time between Waterloo and Toronto, with stops at Wellington-Guelph and Peel, is around 50 minutes; at an average speed of 200 km/h, the travel time is reduced to approximately 38 minutes. For comparative purposes, the journey from Waterloo to Toronto is at least 1 hour 45 minutes by car during the morning peak period. Clearly this estimate is approximate and does not take into account train acceleration and deceleration rates as well as top speeds achieved between stops, but offers an idea of time savings.

The relationships between infrastructure, consumption and economic growth are perhaps best perceived during periods of fundamental change. Particular examples are described in *The Wealth of Cities* (Kennedy, 2008). Rebuilding of London after the Great Fire of 1666 dramatically increased the prosperity of the city. The underlying cause was the new building code that spurred new industries in material manufacturing and created multi-functional buildings in which commercial activities thrived. The widening of London’s roads in the early 19th century, and addition of new roads and bridges, allowed the omnibus to support suburbanization, thereby growing the transportation and home construction sectors of the economy. The subsequent introduction of subways and trams supported significant societal change, growing new sectors in retailing, entertainment and tourism.

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The Martin Prosperity Institute (martinprosperity.org) at the [University of Toronto’s Rotman School of Management](#) is the world’s leading think-tank on the role of sub-national factors – location, place and city-regions – in global economic prosperity. Led by Director [Richard Florida](#), we take an integrated view of prosperity, looking beyond economic measures to include the importance of quality of place and the development of people’s creative potential.

This Martin Prosperity Insight is part of the “Ontario in the Creative Age” series, a project we are conducting for the Ontario Government and is supported by and is supported by Chris Kennedy, Bryan Karney, Eric Miller, and Marianne Hatzopoulou’s working paper “Infrastructure and the Economy: Future directions for Ontario”. [The project](#) was first announced in the 2008 Ontario Budget Speech, and its purpose is to understand the changing composition of Ontario’s economy and workforce, examine historical changes and projected future trends affecting Ontario, and provide recommendations to the Province for ensuring that Ontario’s economy and people remain globally competitive and prosperous. The series will involve a number of Insight releases over the course of the coming months.